the Smart Checkbook

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NOTE: SPECIAL INSTRUCTIONS FOR MICRO DECISION OWNERS

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Section 2 of this manual ("Getting Started") was not written
specifically for the Micro Decision. Therefore you should use
these instructions instead when making your SMART CHECKBOOK
Working Diskette and when running the program for the first time.

This procedure assumes you'll be working through the Micro Menu
system. If you're familiar with using CP/M directly, the in-
structions in Section 2 will probably be sufficient.

MD1 owners please be aware that frequent disk swapping will be
required. The instructions will appear on the screen so they
won't be repeated here.

1.   Starting at the Main Menu, select **U** for the Utility Menu.

2.   Select **5 Format or Sysgen a diskette.**

3.   Pick option 1 **Format a diskette.**

4.   Your next responses are:
      o Drive to be used? **B**
      o Single or double sided? **D** for MD1's and MD3's
                                  S for MD2's.
      o **RETURN** to begin and **RETURN** when done.

5.   Still at the Utility Menu, select 5 **Format or Sysgen a
      diskette** again.

6.   This time, pick option 2 **Sysgen to a diskette.**

7.   Your responses are:
      o DESTINATION DRIVE NAME (first time) **B**
      o DESTINATION DRIVE NAME (second time) **RETURN**

8.   Back at the Utility Menu, use these keystrokes:
      o **C** to change the current drive
      o **C** the name of the new current drive
      o **4 Copy a file or files**
      o **Y** Yes, you want to copy all the files
      o **B** The drive you're copying to

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9. From now on, it's important to keep straight which disk is
    which, since there are now three to deal with. **When the
    lower, left, or only disk drive is reassigned as drive C,
    insert the SMART CHECKBOK Distibution Diskette.** The newly
    formatted and sysgened diskette goes (or stays) in Drive B.
    MD1 owners can expect 17 disk swaps. Other Micro Decisions
    will require only two.

    The CP/M System Diskette will not be needed again until you
    are through using SMART CHECKBOOK.

10. When the prompt "Insert CP/M System Diskette in Drive A: and
    press RETURN" appears, remove the new SMART CHECKBOOK
    Working Diskette from Drive B and label it properly.

11. Press the RESET button on the Micro Decision, insert the
    SMART CHECKBOOK Working Diskette in Drive A, and press
    RETURN.

12. At the A> prompt, type **SMART** and press RETURN. You'll see
    the SMART CHECKBOOK banner and you'll be asked a series of
    questions about your terminal and printer. These questions
    are asked only this one time, unless later on you create
    another SMART CHECKBOOK Working Diskette.

13. Terminal Selection - If you have a Morrow Terminal, select
    it from the menu on the screen. If you have another termi-
    nal, you should select the one you were told to use with
    other software when you created your CP/M System Diskette.
    The possibilities are:

            Level 1: ADM 3A
            Level 2: Soroc IQ120
            Level 3: ADM 31

    The other selections are for people who don't have a Micro
    Decision.

    Every response must be followed by a RETURN and will be
    doublechecked with a Yes/No question. Type **N** if your
    response was correct. A list of technical details about your
    terminal appears along with a Y/N prompt. Don't let this
    throw you. Just respond **N** and **RETURN**.

14. Printer Selection - With Morrow (and just about all other)
    printers, use these responses:

    o **RETURN** for 60 lines per page
    o **RETURN** for Control-L Form Feeds
    o 80 columns for 8 1/2" paper, or 132 for 14" paper

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15. **Insert Checkbook Disk and Press Return** - when you see this message, you are running SMART CHECKBOOK (finally). You are at the point where you can begin using the manual at page 7.

From now on, whenever you want to run SMART CHECKBOOK: reset the Micro Decision, insert the SMART CHECKBOOK Working Diskette in Drive A (instead of the CP/M System Diskette), press **RETURN**, and type **SMART <RETURN>** at the **A>** prompt.

NOTE on SINGLE versus DOUBLE DRIVE SYSTEMS:

It isn't very clear from this documentation that you have the option of keeping your checkbook data on the SMART CHECKBOOK Working Diskette along with the programs. It is assumed that you have a separate, FORMATTED "checkbook disk."

MD1 owners may prefer to use the Working Disk as the checkbook disk as well, since much less disk swapping will be involved. With two drive systems, the normal course of having separate disks is better, since a disk with data only will have more room than one with data <u>and</u> programs.

To use the Working Diskette as the checkbook disk, simply leave the Working Diskette in Drive A at the "Insert checkbook diskette" prompt and press **RETURN**.

<u>Carrying over to a new diskette</u> - At the end of a checking period (say each year), create a new working diskette starting at step 1 two pages back. See Section 7 for instructions on carrying over unreconciled information from the old diskette to the new one. Start with the new Working Diskette, and remember to put B: in front of the old checkbook name. This same procedure may be needed if you have an extremely active system and you run out of disk space during the checking period.

For two drive systems using separate diskettes, insert the checkbook diskette in Drive B, press **RETURN** and don't forget to put **B:** in front of the checkbook name, when asked. For example, a checkbook called HIS1983 should be referred to as B:HIS1983 in response to the "Checkbook name?" prompt.

There is one exception to this "B:" rule: On page 7, the sample checkbook SAMPLE.DAT should be named without any letter or colon in front of it, since it's on the same disk as the programs.

SECTION 1: INTRODUCTION

The SMART CHECKBOOK is a computerized financial system which maintains your checkbook, writes your checks and keeps tax and budget records, turning your checkbook into a data management system. It includes a unique checkbook reconciliation process which automatically locates the mistakes in your checkbook, tells you what they are and makes corrections easily. It is completely prompting, friendly to the user, and gives extensive diagnostic messages.

1.1 FEATURES

(1) More than one year's checks, deposits and charges are available for immediate access; the limit is your disk capacity.

(2) The checkbook reconciliation mode is designed to find mistakes in your checkbook and make corrections easily.

  (a) It identifies items returned by your bank which you have forgotten to enter.
  (b) It identifies duplicate entries.
  (c) It identifies differences in amounts entered in the checkbook and charged by your bank.
  (d) It even finds mistakes your bank may make.

(3) A powerful editor means that corrections are easy to make.

(4) The checkwriter automates your check writing. Memo information, such as account numbers, may be saved and reused automatically. You may choose from a variety of check styles.

(5) Your current checkbook balance is displayed whenever you enter or change items in your checkbook.

(6) You can choose your own personal budget categories to identify each check, deposit or charge. You can also identify your tax deductible checks and bank charges with any one of sixteen Form 1040 tax categories.

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(7) The search and sum mode turns your checkbook into a financial data base. It lets you search any combination of characteristics to obtain a list and/or sum of any checkbook entries which meet criteria you select. Using the checkbook search and sum feature you can quickly list and total your tax deductions for the year by tax category, which simplifies filling out your tax return.

(8) A versatile table mode produces tables of monthly expenses and income which can be viewed on your CRT or printed on your printer. You can create tables by tax category, by budget category, or for any categories you make up. Your categories can be saved and used again.

(9) All outstanding items can be viewed and totaled at just the touch of one button.

(1Ø) You can also use the SMART CHECKBOOK to keep track of your credit card accounts.

(11) A new checkbook can be created from an existing checkbook without reentering items. This is useful for keeping different years' items on different checkbooks.

(12) Whenever a list of items is displayed on the console you have the option of having the list printed on the printer and also saved on disk.

1.2 REQUIREMENTS

The SMART CHECKBOOK runs under the CP/M operating system. Minimum system requirements include the CP/M operating system version 2 or higher, one disk drive, and a 24x8Ø CRT with cursor addressing and clear screen. A printer with at least 8Ø columns is optional.

1.3 MESSAGES

There are two kinds of errors you may have, errors on your checkbook and errors you make when entering information. The errors in your checkbook are explained in extensive diagnostic messages, which are detailed in Section 5, MAIN MENU. Errors you make in entering information are described in error messages, which are detailed in Appendix A, ERROR MESSAGES.

1.4 NOTATION

Brackets []

Brackets indicate that the enclosed item is replaced by its value when the message is displayed.

Braces {}

Braces indicate that one of the enclosed item will appear in a message.

Angle brackets <>

Angle brackets indicate that the enclosed items will appear in a message only when appropriate.

<CR>

This symbol indicates that you press the RETURN or ENTER key.

Y/N

This prompt requests a yes or no response. You may respond YES<CR> or Y<CR> as a yes response. NO<CR>, N<CR>, or <CR> indicates a no response. Either upper or lower case letters are recognized.

SECTION 2: GETTING STARTED

2.1 THE DISTRIBUTION DISKETTE

The diskette you receive contains the following files:

FILE	FUNCTION
SMART.COM	Main program
INITIAL.OVL	Terminal module
RECON.OVL	Reconcile module
TABLE.OVL	Table module
WRITER.OVL	Checkwriter module
NEWBOOK.COM	Starts a succeeding checkbook
SAMPLE.DAT	Sample checkbook
SAMPLE.MEM	Memo file for sample checkbook

Before you do anything else, make a copy of the distribution diskette. The CP/M PIP program may be used to copy each file to the new diskette. If you are using a fresh diskette, remember to format it first, using the CP/M FORMAT program. After you make the copy, put the distribution diskette away in a safe place, and use the copy.

2.2 RUNNING THE SMART CHECKBOOK ON YOUR COMPUTER

MULTIPLE DISK DRIVE SYSTEM

The SMART CHECKBOOK may be run from any drive. When the SMART CHECKBOOK is in the A drive, the diskette must contain the CP/M operating system. You may use the CP/M SYSGEN program to copy CP/M to the diskette. To run the SMART CHECKBOOK from the A drive, insert the diskette, reset your computer, and type

SMART<CR>

To run the SMART CHECKBOOK from any other drive, first "log in" the drive. For example, if the diskette is in the B drive, type

B:<CR>

and then type

SMART<CR>

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Do not write protect the SMART CHECKBOOK diskette yet. The first time you run the SMART CHECKBOOK a file called TERMINAL.DRV is created to store information about your equipment. After the TERMINAL.DRV file is created you may write protect the diskette. You may keep your checkbooks on separate diskettes.

SINGLE DISK DRIVE SYSTEM

Follow the procedure for running the SMART CHECKBOOK from drive A described in MULTIPLE DISK DRIVE SYSTEM. Use the vertual drive capability of your Morrow Micro Decisions to turn your single drive system into a two drive system.

RUNNING THE SMART CHECKBOOK FOR THE FIRST TIME

When you run the SMART CHECKBOOK the logo is displayed.

The first time you run the SMART CHECKBOOK on your system, you will be asked for information about your CRT terminal and printer. This is discussed in detail in Section 8, INSTALLING THE SMART CHECKBOOK ON YOUR COMPUTER. After describing your CRT and printer to the SMART CHECKBOOK, you are ready to go.

Before beginning your own checkbook, it is a good idea to run the SMART CHECKBOOK with the sample checkbook, called SAMPLE.DAT, supplied on the distribution diskette, while you read Section 3, USING THE SMART CHECKBOOK TO MAINTAIN AND BALANCE YOUR CHECKBOOK (A HANDS ON TUTORIAL). This section will take you through the steps of entering checkbook items, using the checkwriter and reconciling a sample bank statement. It will show you how easy it is to find and correct mistakes in the checkbook.

The SMART CHECKBOOK is completely prompting, and requires minimal reference to the manual. However, read Section 4, STARTING YOUR CHECKBOOK, before you enter anything into your own checkbook. Until you are familiar with the SMART CHECKBOOK it is recommended that you use both your current system of checkbook record keeping and the SMART CHECKBOOK.

SECTION 3. USING THE SMART CHECKBOOK TO MAINTAIN AND BALANCE A CHECKBOOK (A HANDS ON TUTORIAL)

Before you use the tutorial, read Section 2, GETTING STARTED, which describes how to run the SMART CHECKBOOK and how to install it on your computer.

This section is designed to give you hands on experience with the SMART CHECKBOOK the first time you use it. This tutorial begins after you have entered your CRT and printer information, (see Section 2) and uses the sample checkbook, SAMPLE.DAT, supplied with the distribution diskette. BE SURE TO USE THE COPY YOU HAVE MADE OF THE DISTRIBUTION DISKETTE, and not the distribution diskette itself.

This tutorial shows you how to add some checkbook items, reconcile the sample checkbook with a sample bank statement and use the checkwriter. The tutorial process has built in errors to demonstrate how easily the SMART CHECKBOOK finds and corrects errors on a checkbook.

The sample checkbook contains Mr. Thompson's checking account for the three months, January, 1981 through March, 1981. When he set up this checkbook, Mr. Thompson decided that the suggested budget categories listed in Section 4.1 met his needs. He made sure that he began his checkbook entries at a time his checkbook was in balance, and when he was asked for his beginning balance, he entered the amount which was on his last bank statement, and not the balance in his checkbook. He then entered those items which had not yet been returned by his bank (outstanding items). At this point the checkbook was ready for use. Mr. Thompson has since entered his checking account transactions through March 27, and has reconciled his checkbook with his January and February bank statements.

Mr. Thompson has written three more checks, made one deposit, and has had one bank charge, which he did not enter into the checkbook. He also received his March bank statement. This tutorial shows you how to enter the checking account transactions, how to reconcile the statement with the checkbook and how to print checks. Mr. Thompson has made several errors in his checkbook, and the tutorial shows you how easy it is to find and correct them.

If you do not want to complete the tutorial in one session, you may stop whenever the MAIN MENU is displayed by choosing 99 to exit from the SMART CHECKBOOK. You may also stop during the checkbook reconciliation process whenever you get a menu which includes the choice SAVE RETURNED ITEMS AND/OR EXIT. To save and restart the reconciliation process see Section 5.4.6.

Run the SMART CHECKBOOK program. See Section 2.2 for the command you should use.

If this is the first time you are running the SMART CHECKBOOK, you will be asked for information about your CRT and printer. Section 8 tells you how to enter this information.

After the logo appears and you are prompted

INSERT CHECKBOOK DISK AND PRESS RETURN WHEN READY

press return, because the checkbook you are going to use, SAMPLE.DAT, is on the same diskette as the SMART CHECKBOOK.

When you are prompted

ENTER CHECKBOOK NAME:

respond with <drive:>SAMPLE.DAT<CR>, where <drive:> is the disk drive where SAMPLE.DAT is. The MAIN MENU will appear:

MAIN MENU

        1. ENTER ITEMS IN CHECKBOOK
        2. CHECKBOOK EDITOR
        3. CHECKWRITER
        4. RECONCILE CHECKBOOK
        5. CURRENT BALANCE
        6. LIST OUTSTANDING ITEMS
        7. CHECKBOOK SEARCH AND SUM
        8. MONTHLY INCOME AND EXPENSE TABLES
       99. EXIT

NUMBER?

Enter 1<CR>, and the screen will show

CURRENT BALANCE IS $1569.30
                LAST ENTRY ON CHECKBOOK
ITEM DATE   PAYEE/DESCRIPTION   AMOUNT BUDGET   TAX CAT
1878 3/27/81   GIANT $90.00 FOOD

PRESS RETURN TO CONTINUE

This check was the last item Mr. Thompson entered. Press return, and you will be prompted to enter the rest of Mr. Thompson's checking account transactions.

He wrote check number 1879 on March 30, 1981 to Bloomingdale's for $46.81, to pay for various items his wife had charged. He wrote check number 1880 on March 31 to cash for $70.00 for his personal expenses. He wrote check number 1881 on April 2 to his dentist, F.W. Magruder, D.D.S. for $28.00, a medical deduction. On April 3 he deposited his salary check for $1107.69. He was notified by his bank that they were charging his account $3.81 on April 1 for printing 200 checks. On his March 19, 1981 bank statement he saw that his checking account (NOW account) had earned $5.47 interest.

On the lower part of the screen, the reminder

PRESS RETURN TO END INPUT - PRESS CONTROL A TO EDIT PREVIOUS ITEM

appears, followed by the prompt

Check #, DEPosit or CHARge:

To enter the Bloomingdale's check, enter 1879<CR>. The number you enter replaces the reminder. You are then prompted

DATE(MM/DD/YY) OR PRESS RETURN FOR PREVIOUS DATE:

Enter 3/30/81<CR>, which is displayed next to the check number. You are then prompted

PAYEE/DESCRIPTION:

Enter BLOOMINGDALE'S<CR>, which is displayed next to the date. You are then prompted

AMOUNT:

Enter 46.81<CR>, which is displayed next to the payee. You are then prompted

BUDGET CATEGORY NUMBER, M FOR MENU OR RETURN FOR NONE:

Enter M<CR> to get the budget category menu. The list of budget categories and their numbers is displayed. Enter 3<CR> to the prompt

NUMBER?

Note that there is no need to display the menu if you know the number of the budget category. All you need do is enter the number in response to the prompt. Finally, you are prompted

TAX DEDUCTION NUMBER, M FOR MENU OR RETURN FOR NONE:

Press return because this check is not tax deductible.

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If you make a mistake while entering an item, press the control key together with the "A" key when you are next prompted for Check #, DEPosit or CHARge:, and you may correct the item you have just entered.

The ENTER ITEMS process is described in greater detail in Section 5.1.

Now enter the checks for cash and the dentist.

To enter the deposit, reply DEPOSIT<CR> when you are prompted Check #, DEPosit or CHARge: and the other information as you are prompted for it. You will not get the tax deduction prompt because a deposit cannot have a tax deduction associated with it.

To enter the charge, reply CHARGE<CR> to the prompt for Check #, DEPosit or CHARge: and the other information as you are prompted for it.

The interest earned by Mr. Thompson's checking account is treated as a deposit. Enter the interest.

After you have finished entering the six items, respond <CR> to the Check #, DEPosit or CHARge: prompt. At this point the screen should look like this. (The payees are shown in upper case, but lower case is also acceptable.)

CURRENT BALANCE IS $2,533.84

ITEM	DATE	PAYEE/DESCRIPTION	AMOUNT	BUDGET	TAX CAT
1879	3/30/81	BLOOMINGDALE'S	$46.81	CHG CARD	
1880	3/31/81	CASH	$70.00	PERSONAL	
1881	4/2/81	F.W. MAGRUDER, D.D.S.	$28.00	MEDICAL	MEDICAL
DEP	4/3/81	SALARY	$1107.69	SALARY	
CHAR	4/1/81	200 CHECKS	$3.81	MISC EXP	
DEP	3/19/81	NOW INTEREST	$5.47	INTEREST	

DO YOU WANT TO EDIT THE ITEMS YOU HAVE JUST ENTERED? Y/N

If the screen display is not as shown, respond yes and you will be prompted for the changes to be made. See Section 5.2 if you want more information about the checkbook editor. If you do not want to change any items, respond no to the prompt.

You are asked if you want these items listed on the printer. Answer yes to list the items, no to bypass printing. Then you are asked if you want the report saved on disk. Answer yes to save, no to bypass. If you answer yes, you will be asked for the name of the report file. Whenever you can get a printed report you can

FIGURE 3-1

MR. THOMPSON'S BANK STATEMENT

FIRST NATIONAL BANK

ACTIVITY STATEMENT
ACCOUNT NO. Ø6-75818-Ø3
STATEMENT DATE Ø3/19/81

MICHAEL D. THOMPSON
165Ø OCEAN AVENUE
MCLEAN, VIRGINIA 221Ø1

CHECKING STATEMENT SUMMARY.....................................

PREVIOUS STATEMENT Ø2/19/81, BALANCE OF...	1Ø42.53
3 DEPOSITS AND OTHER CREDITS TOTALING	222Ø.85
2Ø CHECKS AND OTHER DEBITS TOTALING...	2Ø54.85
SERVICE CHARGE AMOUNT	.ØØ
CURRENT BALANCE AS OF STATEMENT DATE.......	12Ø8.53

INTEREST PAID: THIS PERIOD   5.47; YEAR TO DATE   15.53

CHECKING ACCOUNT TRANSACTIONS..................................

DATE	AMOUNT	TRANSACTION DESCRIPTION
Ø3/Ø2/81	21.6Ø	AUTHORIZED DEBIT SAFE DEPOSIT RENTAL
Ø2/2Ø/81	11Ø7.69+	DEPOSIT
Ø3/Ø6/81	11Ø7.69+	DEPOSIT
Ø3/19/81	5.47+	INTEREST EARNED

The following checks were returned with the bank statement:

CHECK #	AMOUNT	DATE	PAYEE
185Ø	25.ØØ	2/16/81	HEART FUND
1851	6Ø.ØØ	2/18/81	CASH
1852	7.ØØ	2/2Ø/81	KEITH RUSH
1854	7Ø.ØØ	2/24/81	CASH
1853	8Ø.ØØ	2/19/81	GIANT
1855	1Ø.67	2/24/81	RICK'S MARKET
1856	186.35	2/25/81	VISA
1857	52.75	2/26/81	AL'S APPLIANCE SERVICE
1858	9Ø.ØØ	2/27/81	GIANT
1859	65.ØØ	3/3/81	CASH
186Ø	2Ø.ØØ	3/3/81	ROBERT THOMPSON
1861	121.Ø8	3/5/81	EXXON
1864	133.29	3/9/81	WASHINGTON GAS LIGHT
1865	32.68	3/9/81	C&P TELEPHONE CO.
1867	8Ø.ØØ	3/11/81	CASH
1866	44.43	3/11/81	VIRGINIA ELECTRIC
1868	9Ø.ØØ	3/13/81	GIANT
1863	9Ø.ØØ	3/6/81	GIANT
1869	775.ØØ	3/16/81	FIRST FEDERAL S&L

save the report on disk in addition to or instead of printing it. You are next asked if you want to write the checks you just entered. Answer **no**. You will then return to the MAIN MENU. You will be using the checkwriter later in the tutorial.

Mr. Thompson received his March bank statement, which is reproduced in Figure 3-1. To reconcile this statement with his checkbook, respond **4<CR>** to the MAIN MENU number prompt. It is convenient to have the bank statement in front of you as you follow the tutorial.

The screen then shows when the checkbook was last balanced:

LAST STATEMENT RETURNED WAS DATED 2/19/81

You are asked:

HAVE YOU RECEIVED A NEW BANK STATEMENT? Y/N

Respond yes. You are then prompted for the STATEMENT STATISTICS. Using Mr. Thompson's bank statement, enter the STATEMENT DATE, NUMBER OF CHECKS AND CHARGES (DEBITS) RETURNED, NUMBER OF DEPOSITS (CREDITS) RETURNED, and the ENDING BALANCE ON STATEMENT when you are prompted for each of them.

After you have entered the statement statistics, the screen display should look like this:

STATEMENT STATISTICS

STATEMENT DATE: 3/19/81
NUMBER OF CHECKS AND CHARGES (DEBITS) RETURNED: 20
NUMBER OF DEPOSITS (CREDITS) RETURNED: 3
ENDING BALANCE ON STATEMENT: $1,208.53
ANY CHANGES? Y/N

If the display does not look like this, then respond yes to the question

ANY CHANGES? Y/N

and make the appropriate corrections. For more information about the statement statistics, see Section 5.4.1. If the statement statistics are correct, respond no, and you will be prompted to enter the returned items, starting with the returned checks.

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On the lower part of the screen the reminder

PRESS RETURN TO END INPUT - PRESS CONTROL A TO EDIT PREVIOUS ITEM

appears, followed by the prompt

CHECK NUMBER

Enter 1850<CR>, which is then displayed on the line above the prompt. You are then prompted

AMOUNT:

Enter 25<CR>. After you enter the amount, the returned check information is displayed on the upper part of the screen with a line number assigned by the SMART CHECKBOOK. Continue to enter the returned checks. When you enter the thirteenth returned check, the first check is removed from the screen display, and the checks move up one line so that checks 2 through 13 are displayed. As you continue to enter checks, the check at the top of the display is removed, and the check you just entered is displayed at the bottom.

When you have entered all 19 checks, reply <CR> to the CHECK NUMBER prompt. The total dollar value of the checks you entered will be displayed on the lower portion of the screen. You can correct any errors after you enter all of the returned items.

TOTAL OF CHECKS RETURNED WITH STATEMENT $2033.25
PRESS RETURN TO CONTINUE

Press return and you will be prompted to enter returned charges. Checks and charges are both debits to your account. The difference between them is that a check is identified by a check number and a charge is identified by the date the charge occurred. The procedure for entering returned charges is similar to that for returned checks, except that you are prompted for the charge date instead of the check number. The bank has charged Mr. Thompson's account for a safe deposit rental. Enter the date and amount of the safe deposit rental. This is the only charge. When you are again prompted for the date press return, and verify that the total of checks and charges displayed is the same as the total of checks and other debits on the bank statement.

TOTAL OF CHARGES RETURNED WITH STATEMENT $21.60
TOTAL OF CHECKS AND CHARGES (DEBITS) RETURNED WITH STATEMENT $2054.85
PRESS RETURN TO CONTINUE

Press **return**, and you are prompted to enter the returned deposits. The procedure for entering returned deposits is similar to that for returned charges. After you enter the three returned deposits, press **return** and verify that the total displayed is the same as the total deposits on the bank statement.

TOTAL OF DEPOSITS RETURNED WITH STATEMENT $2220.85
PRESS RETURN TO CONTINUE

When you press **return**, you are asked if you want to edit the returned items. Answer **yes**. Normally you would let the SMART CHECKBOOK find the errors for you, but this tutorial has certain errors built into the checkbook, and if the returned items are not entered correctly, these errors will not show up exactly as planned, therefore make sure that the returned items have been entered correctly and in the order shown. If you want more information about editing returned items, see Section 5.4.5.

You first review the checks you entered. The first screen display shows 12 checks. When you are finished reviewing and editing the first screen display, press **return** to get the next screen display, which shows 7 checks. If your screen displays do not match the ones shown below exactly, edit the returned checks so that they do match. Enter **E<CR>** to edit the checks if necessary.

If the total of the checks on your screen display matches the one shown below, but the total of the checks and charges does not match, then there is an error in the amount you entered for the charge. You will have the opportunity to correct it after the returned checks have been reviewed.

CHECKS RETURNED WITH STATEMENT   TOTAL $2033.25   CHECKS & CHARGES $2054.85

LINE	NUMBER	AMOUNT
1	1850	$25.00
2	1851	$60.00
3	1852	$7.00
4	1854	$70.00
5	1853	$80.00
6	1855	$10.67
7	1856	$186.35
8	1857	$52.75
9	1858	$90.00
10	1859	$65.00
11	1860	$20.00
12	1861	$121.08

PRESS RETURN TO CONTINUE, E TO EDIT OR X TO EXIT

```
CHECKS RETURNED WITH STATEMENT  TOTAL $2033.25  CHECKS & CHARGES $2054.85
LINE  NUMBER              AMOUNT
  13 1864              $133.29
  14 1865               $32.68
  15 1867               $80.00
  16 1866               $44.43
  17 1868               $90.00
  18 1863               $90.00
  19 1869              $775.00
```

PRESS RETURN TO CONTINUE, E TO EDIT OR X TO EXIT

When you have finished reviewing and editing the second group of checks, press **return**, and the returned charge is displayed.

Make sure that the line, date and amount match the charge shown below, and edit the charge if needed.

```
CHARGES RETURNED WITH STATEMENT TOTAL   $21.60  CHECKS & CHARGES $2054.85
LINE  DATE                AMOUNT
   1 3/2/81               $21.60
```

PRESS RETURN TO CONTINUE, E TO EDIT OR X TO EXIT

After you have finished reviewing and editing the returned charge, press return, and the returned deposits are displayed.

Make sure that each line, date and amount matches the ones shown below, and edit the deposits if needed.

```
DEPOSITS RETURNED WITH STATEMENT TOTAL $2220.85
LINE  DATE                AMOUNT
   1 2/20/81            $1107.69
   2 3/6/81             $1107.69
   3 3/19/81               $5.47
```

PRESS RETURN TO CONTINUE, E TO EDIT OR X TO EXIT

Press **return** when you have finished reviewing and editing the returned deposits. You are asked if you want to list these items on the printer. Answer yes to list the returned items, no to bypass printing.

Now that the returned items have all been entered and edited, if needed, the SMART CHECKBOOK automatically verifies that you entered as many checks and charges and deposits as you said were returned by the bank. Since you have already verified the total dollar amounts of the checks, deposit and charges, there should be no discrepancy in the numbers, but if there is, you now have another opportunity to edit the returned items.

When the number of returned checks and charges and deposits agree with the statement statistics, the message

..... WORKING .....

appears in the center of the screen, as the SMART CHECKBOOK matches the returned items to the checkbook entries.

There are several errors in Mr. Thompson's checkbook, so the next message you get is:

CANNOT RECONCILE BECAUSE

There are CHECKS returned but not on the checkbook
There are DEPOSITS returned but not on the checkbook
There are DISAGREEMENTS in amount between RETURNED CHECK and CHECKBOOK
There are DUPLICATE CHECKS on the checkbook

THE FOLLOWING ITEMS WILL BE LISTED TO AID IN CORRECTIONS

CHECKS returned but not on the checkbook
DEPOSITS returned but not on the checkbook
DISAGREEMENTS in amount between RETURNED CHECK and CHECKBOOK
DUPLICATE CHECKS on the checkbook
Items still OUTSTANDING
All RETURNED ITEMS

YOU MAY EDIT THE CHECKBOOK AND THE RETURNED ITEMS
DO YOU WANT THESE ITEMS LISTED ON THE PRINTER? Y/N

All the lists are displayed on your CRT. If you also want the lists on your printer, answer yes, and press return when the printer is ready. DO NOT press escape, or you will not be able to make corrections at this time. The escape key is used only for unattended listing where you will correct the checkbook later.

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The first list you get is

THE FOLLOWING RETURNED CHECKS ARE NOT ON THE CHECKBOOK
LINE CHECK NUMBER   AMOUNT
   10 1859 $65.00
   15 1867 $80.00

PRESS RETURN TO CONTINUE

Returned checks appear on this list if they were not entered in the checkbook or if they were entered with the wrong check number. Mark these checks on the list of checks returned with Mr. Thompson's bank statement. Both checks are written to cash. Check number 1859 is dated 3/3/81, and check number 1867 is dated 3/11/81.

When you press **return**, you get the next list.

THE FOLLOWING RETURNED DEPOSITS ARE NOT ON THE CHECKBOOK
LINE DEPOSIT DATE   AMOUNT
   2 3/6/81 $1107.69

PRESS RETURN TO CONTINUE

Returned deposits appear on this list if both the date and amount do not match a deposit on the checkbook. Mark this deposit on Mr. Thompson's bank statement. Look on the list of outstanding deposits, when it is displayed, to see if there is a deposit for this amount with a different date, or if there is a deposit on this date with a different amount.

When you press **return** you get the list of checks with disagreements in amount.

```
THE FOLLOWING CHECKS DISAGREE IN AMOUNT
CHECK            CHECKBOOK              RETURNED
NUMBER     LINE      AMOUNT      LINE      AMOUNT
1865        54       $32.86       14       $32.68
1866        56       $80.00       16       $44.43

PRESS RETURN TO CONTINUE
ENTER C TO CHANGE CHECKBOOK ITEM OR R TO CHANGE RETURNED ITEM
```

Look at check number 1865 returned with Mr. Thompson's statement. The checkbook entry has the cents transposed, so enter **C<CR>** to change the checkbook item. When you are prompted for LINE NUMBER, respond **54<CR>**, the line number of the checkbook entry. The checkbook entry is displayed on the lower part of the screen, followed by the CHANGES menu. Enter **4<CR>** to change the amount, enter the correct amount (**32.68<CR>**), and then enter **99<CR>** to exit from the CHANGES menu.

Notice that when you change the checkbook entry, your current balance is displayed at the top of the screen and is updated when you change the amount. The display for check number 1865 is not changed, but the amount recorded in the checkbook is. If you want to verify this, enter C<CR> and then enter 54<CR> for the line number. This displays the checkbook entry, which will show $32.68 for the amount. Exit from the CHANGES menu.

Look at check number 1866 on Mr.Thompson's bank statement. The check returned with the bank statement shows an amount of $44.43 payable to VIRGINIA ELECTRIC. Compare this to the checkbook entry by entering **C<CR>** and then the line number of the checkbook entry (**56<CR>**). The checkbook shows an $80.00 check for CASH, dated 3/11/81. You know that check 1866 is for VIRGINIA ELECTRIC, since you have the actual check returned with the statement, so the checkbook entry must have a wrong check number.

Recall that you marked a returned check for CASH for $80.00 dated 3/11/81. Change the check number of the checkbook entry to agree with this returned check number. Enter **1<CR>** to change the check number and then enter the correct check number (**1867<CR>**).After you make the change, exit from the CHANGES menu, and then press return to get the list of duplicate checks. Each pair of checks with the same check number will be listed.

```
THE FOLLOWING CHECKS ARE DUPLICATES
LINE  ITEM  DATE         PAYEE/DESCRIPTION      AMOUNT   BUDGET     TAX CAT
  56  1867  3/11/81      CASH                   $80.00   PERSONAL
  58  1866  3/11/81      VIRGINIA ELECTRIC      $44.43   ELECTRIC
  55  1863  3/?/81       GIANT                  $90.00   FOOD
  60  1863  3/6/81       GIANT                  $90.00   FOOD

PRESS RETURN TO CONTINUE OR E TO EDIT
```

The checks to CASH and VIRGINIA ELECTRIC are listed as duplicates because they had the same check number when the SMART CHECKBOOK matched the returned checks to the checkbook entries. You have already changed the number of the check to CASH, and you do not have to do anything about the VIRGINIA ELECTRIC check.

The two checks to GIANT are almost identical, but the one on line 55 has a question mark in the date. Mr.Thompson accidentally entered the same check twice. Enter E<CR> to edit the checkbook.

The EDIT MENU will appear on the lower part of the screen. To delete one of the GIANT checks enter 2<CR>. When you are prompted for the LINE NUMBER, enter the line number of the check with the incomplete date (55<CR>). This check will appear for your verification on the lower part of the screen. Answer **yes** to delete the check. The current balance will be updated and the check on line 55 removed from the upper part of the screen. Since you have no more changes to make, exit from the EDIT MENU.

Now press **return,** and you get the list of outstanding checks. These are the checks which did not match the returned checks before you made any corrections. Note that the VIRGINIA ELECTRIC and GIANT checks will also appear in the list of outstanding checks.

When you got the list of returned checks not on the checkbook, you marked check number 1859. Now look at the outstanding checks to see if there is a check to CASH for $65.00, dated 3/3/81. Twelve outstanding checks are displayed on the screen at one time.

```
THE FOLLOWING CHECKS ARE OUTSTANDING
LINE ITEM DATE          PAYEE/DESCRIPTION        AMOUNT BUDGET    TAX CAT
  58 1866 3/11/81       VIRGINIA ELECTRIC        $44.43 ELECTRIC
  60 1863 3/6/81        GIANT                    $90.00 FOOD
  62 1871 3/17/81       RICK'S MARKET            $14.83 FOOD
  63 1870 3/16/81       CASH                     $70.00 PERSONAL
  65 1872 3/18/81       TOYS R US                $20.18 PERSONAL
  66 1873 3/20/81       KEITH RUSH (NEWSPAPER)    $7.00 MISC EXP
  67 1874 3/21/81       GIANT                   $110.00 FOOD
  68 1875 3/26/81       VISA                    $172.26 CHG CARD
  69 1876 3/26/81       BROOKS BROTHERS         $232.27 CLOTHES
  70 1878 3/27/81       GIANT                    $90.00 FOOD
  71 1879 3/30/81       BLOOMINGDALE'S           $46.81 CHG CARD
  72 1880 3/31/81       CASH                     $70.00 PERSONAL

PRESS RETURN TO CONTINUE OR E TO EDIT
```

Press **return** to display the rest of the outstanding checks.

```
THE FOLLOWING CHECKS ARE OUTSTANDING
LINE ITEM DATE          PAYEE/DESCRIPTION        AMOUNT BUDGET    TAX CAT
  73 1881 4/2/81        F.W. MAGRUDER, D.D.S.    $28.00 MEDICAL   MEDICAL

PRESS RETURN TO CONTINUE OR E TO EDIT
```

There is no $65.00 check outstanding, so enter E<CR> to edit, and when the EDIT menu appears, enter 1<CR> to add check number 1859 to the checkbook. You are prompted for check number, date, payee, amount, budget and tax categories. Look at Mr.Thompson's bank statement for the information to enter. When you add the check to the checkbook, the new checkbook balance is displayed. Now exit from the EDIT menu, and then press return. The total of outstanding checks is displayed; this total does not reflect any of the corrections you made.

When you press **return** again, the outstanding charges are displayed.

```
THE FOLLOWING CHARGES ARE OUTSTANDING
LINE ITEM DATE       PAYEE/DESCRIPTION        AMOUNT BUDGET     TAX CAT
  75 CHAR 4/1/81     200 CHECKS               $3.81 MISC EXP

PRESS RETURN TO CONTINUE OR E TO EDIT
```

There are no changes to make here, so press return. The total of charges and of checks and charges are displayed. Press return again, and the outstanding deposits are displayed.

When you got a returned deposit not on the checkbook, you marked it on Mr. Thompson's bank statement. Now see if there is a deposit which matches either that date or amount, but not both.

```
THE FOLLOWING DEPOSITS ARE OUTSTANDING
LINE ITEM DATE       PAYEE/DESCRIPTION        AMOUNT BUDGET     TAX CAT
  52 DEP  3/6/81     SALARY               $1107.96 SALARY
  64 DEP  3/20/81    SALARY               $1107.69 SALARY
  74 DEP  4/3/81     SALARY               $1107.69 SALARY

PRESS RETURN TO CONTINUE OR E TO EDIT
```

The deposit on line 52 matches the date but not the amount of the deposit. Because you may have more than one deposit on a given date, the SMART CHECKBOOK matches both date and amount. In this example, the deposit was entered in the checkbook incorrectly, with the cents transposed. Enter E<CR> to edit the deposit.

When the EDIT menu is displayed, enter 3<CR> to change the deposit. Then enter the line number of the deposit you want to change (52<CR>), and change the amount. The current balance is updated. Now exit from the CHANGES menu, and the screen display will show the changed deposit.

The EDIT menu is repeated. Since you have no more editing to do here, exit from the EDIT menu.

After you exit from the editor, press return, and you get the total of outstanding deposits. Press return again, and the next lists display all checks, charges and deposits returned. Since there are no errors to correct in the returned items, enter X<CR> at each prompt.

After the returned items have been listed, you have one more chance to edit the checkbook and returned items, when the CLEANUP MENU is displayed.

If you want to exit from the reconciliation process at this time, you may do so when the CLEANUP MENU is displayed. Choose 99 to save the returned items and exit, and when you are prompted for a file name, enter <drive:>MAR81.SAV<CR>. The statement information and returned items will be saved on this file, and you return to the MAIN MENU. When you next choose to reconcile SAMPLE.DAT, answer **no** to the question HAVE YOU RECEIVED A NEW BANK STATEMENT? Y/N, and answer **yes** to the question DO YOU WANT TO RESTART WITH PREVIOUSLY SAVED RETURNED ITEMS? Y/N. See Section 5.4.6, SAVING AND RESTARTING A RECONCILIATION SESSION, for more details.

CLEANUP MENU
1. RETURNED ITEM EDITOR
2. CHECKBOOK EDITOR
3. TRY RECONCILING AGAIN
99. SAVE RETURNED ITEMS AND/OR EXIT

Now enter **3<CR>** to try reconciling again. You will again get the message

..... WORKING .....

and because you have corrected all the errors, the screen displays

CHECKBOOK BALANCES!
CURRENT BALANCE IS $2558.75

DO YOU WANT OUTSTANDING ITEMS LISTED ON THE PRINTER? Y/N

Respond yes to get the outstanding items on your printer as well as on your CRT, respond no for the CRT display only.

The outstanding checks, charges and deposits are listed with the totals; the lists and totals include the corrections you have made. Press **return** for each prompt. At this point you return to the MAIN MENU.

After his checkbook is balanced, Mr. Thompson decides to write checks for his electric and fuel bills. The first check is number 1882 dated April 11, 1981 to Virginia Electric for $47.26, assigned to the electric budget category (number 4). The next check is number 1883 with the same date to Washington Gas Light for $127.89, assigned to the fuel budget category (number 5). This part of the tutorial shows you how to write these checks with the SMART CHECKBOOK. The first time Mr. Thompson used the checkwriter, he selected the check form he wanted from the CHECK FORM MENU. Mr. Thompson's checks will be written on the continuous check forms supplied with this manual.

Now that you have balanced Mr. Thompson's checkbook, the screen displays the MAIN MENU. (If you are returning to the tutorial, run the SMART CHECKBOOK as you did before. When you are prompted for the checkbook name, respond <drive:>SAMPLE.DAT.)

Enter 1<CR> to the MAIN MENU number prompt for the ENTER ITEMS mode. The screen will show:


```
CURRENT BALANCE IS           $2,558.75
                LAST ENTRY ON CHECKBOOK:
ITEM DATE       PAYEE/DESCRIPTION              AMOUNT BUDGET     TAX CAT
1859 3/3/81     CASH                           $65.00 PERSONAL

PRESS RETURN TO CONTINUE
```


Press **return** and enter the two checks. After you enter the second check, respond <CR> to the Check #, DEPosit, CHARge: prompt. At this point the screen should look like this:


```
CURRENT BALANCE IS           $2,383.60
ITEM DATE       PAYEE/DESCRIPTION              AMOUNT BUDGET     TAX CAT
1882 4/11/81    Virginia Electric              $47.26 ELECTRIC
1883 4/11/81    Washington Gas Light           $127.89 FUEL

DO YOU WANT TO EDIT THE ITEMS YOU HAVE JUST ENTERED? Y/N
```


If the screen display is not as shown, answer yes and you will be prompted for the changes to be made. See Section 5.2 if you want more information about the checkbook editor.

If there are no changes to be made, respond no to the prompt.

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You are then asked if you want the items listed on the printer:

DO YOU WANT THESE ITEMS LISTED ON THE PRINTER? Y/N

Answer no to bypass printing and you are asked:

DO YOU WANT TO WRITE THE CHECKS YOU HAVE JUST ENTERED? Y/N

Answer yes, and the CHECKWRITER OPTIONS MENU is displayed.

CHECKWRITER OPTIONS

Each check is displayed on the screen before it is written
Checks with invalid dates, blank payees or zero amounts are not written
You may write a memo on any check

STANDARD   OPTION

Verify check before writing   C=DO NOT verify check before writing
Pause after error messages   P=DO NOT pause after error messages
Write a memo   W=DO NOT write a memo
Verify memo before writing   M=DO NOT verify memo before writing

ENTER OPTIONS OR PRESS RETURN FOR NO OPTIONS

Press return for the standard features. See Section 5.3 if you want more information about these features. The features you selected are displayed on the lower part of the screen:

Verify check before writing
Pause after error messages
Write a memo
Verify memo before writing

You are asked if you want to change your choices. Reply no. Next you are asked if you want the checks written on disk instead of the printer. Answer no to print the checks directly on the printer, yes to write the check images on disk. If you answer yes, you will be asked for a file name.

The Virginia Electric check will appear on the lower part of the screen. You are asked:

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WRITE CHECK? Y/N

Answer yes.

The memo for the Virginia Electric check will now appear.

MEMO FOUND: Acct #40 60 8010 1
DO YOU WANT TO REENTER THE MEMO? Y/N

Mr. Thompson had entered this memo when he wrote an earlier check to Virginia Electric, and he filed the memo at that time.

Answer no, and this memo will be written on the Virginia Electric check.

If you are printing the check images on disk, the Virginia Electric check will be written on disk now. Skip the alignment section and go the the paragraph headed "Next Check." If you are printing the checks directly to the printer, the SMART CHECKBOOK helps you align your checks properly. You are prompted:

INSERT CHECKS IN PRINTER
ALIGN PRINT HEAD WITH THE TOP OF THE FORM
TURN ON PRINTER. PRESS RETURN WHEN READY

Place the continuous check forms in the printer so that the printer is set to write on the first line below the perforations. Some printers have a marker which points to the perforations when the printer is set to write on the first line of the form.

When you think you have the check form positioned properly, press return. You will then be asked

DO YOU WANT TO WRITE A SAMPLE CHECK TO TEST THE ALIGNMENT? Y/N

Answer yes. A sample check for $42.65 dated April 11, 1981 will be written with "VOID" for the check number, "SAMPLE CHECK TO TEST ALIGNMENT" for the payee, and "SAMPLE MEMO TO TEST ALIGNMENT" for the memo. While this sample check is being written, the message

PRESS ANY KEY TO STOP CHECKWRITER

is displayed on the screen. Ignore this message for now. After the sample check is written, you will be prompted

PRESS RETURN TO WRITE CHECK, R TO RETEST ALIGNMENT OR X TO EXIT

If the check is not aligned properly, enter R<CR>, and the alignment test will be repeated, starting with the prompt to insert the checks. (You may have to repeat this procedure a few times to learn how to position the form in your printer.)

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When the form is positioned properly, press **return**, and the Virginia Electric check will be written. The reminder, PRESS ANY KEY TO STOP CHECKWRITER, is displayed while the check is written. **While the printer is writing the check, press any key** (except the CONTROL key by itself). The printer will stop, and the CHECKWRITER STOP MENU will appear on the screen.

<pre>
         CHECKWRITER STOP MENU
     1. CONTINUE WRITING THIS CHECK
     2. RESUME WRITING WITH NEXT CHECK
    99. EXIT
</pre>

Enter **1<CR>**, and the printer will continue writing the Virginia Electric check where it left off. After the check is written, it will be displayed on the upper part of the screen.

Next Check

Now the Washington Gas Light check is displayed and you are again asked:

WRITE CHECK? Y/N

Answer **yes.** There is no memo on file for Washington Gas Light, so the following message will appear

NO MEMO FOUND

and you will be asked

DO YOU WANT TO ENTER A MEMO? Y/N

Answer yes. You will be prompted for the memo.

MEMO:

Enter **Acct #3360.1234<CR>**.

If you want to change the memo you just entered, answer yes when you are asked

ANY CHANGES? Y/N

Next you will be asked if you want to file this memo.

DO YOU WANT TO FILE THIS MEMO? Y/N

Answer yes. In the next example you will see how this memo appears automatically.

The form is already positioned properly for this check, so the alignment prompt does not appear. After the Washington Gas check is written, it will be displayed on the upper part of the screen.

At this point you are finished with the two checks you just entered and

CHECK WRITING COMPLETED
2 CHECKS WRITTEN
PRESS RETURN TO CONTINUE

is displayed on the lower part of the screen. When you press **return**, the MAIN MENU is repeated.

Now try using the CHECKWRITER from the MAIN MENU. Enter 3<CR> for the CHECKWRITER. The CHECKWRITER MENU will appear:

CHECKWRITER MENU

  1. REVIEW OUTSTANDING CHECKS AND SELECT FOR WRITING
  2. SELECT RANGE OF CHECK NUMBERS FOR WRITING
  3. SELECT RANGE OF LINE NUMBERS FOR WRITING
  4. CHANGE CHECK FORM
  5. LIST AND EDIT MEMO FILE
  6. PRINT MEMO FILE
99. EXIT

You know the check numbers of the checks you want to write (1882 and 1883). Enter 2<CR> to specify the check number range and enter the beginning check number (**1882<CR>**) and ending check number (**1883<CR>**) when you are prompted for them.

You are asked if you want to change the check numbers. When you answer **no**, the CHECKWRITER OPTIONS are displayed. Now try options CM. The C option writes checks without first asking you if the check should be written, and the M option automatically writes any memos which are already on file onto the appropriate checks. Since you just filed a memo for Washington Gas Light, there are memos on file for both checks.

The alignment prompt is repeated. If you haven't moved the check forms since the last check was written, the forms are positioned properly.

When the checkwriting is completed, press **return** and the CHECKWRITER MENU is repeated. Try the other CHECKWRITER features if you like. When you are finished, enter **99<CR>** to return to the MAIN MENU. You may try the other features of the SMART CHECKBOOK or you may exit from the program.

SECTION 4:   STARTING A CHECKBOOK

After the SMART CHECKBOOK reads the TERMINAL.DRV file, you are asked to:

INSERT CHECKBOOK DISK AND PRESS RETURN WHEN READY

For a two drive system, you may remove the CP/M diskette from drive A and insert the checkbook diskette in that drive. The diskette containing the SMART CHECKBOOK must not be removed.

You are next prompted for the name of the checkbook file. This must be a CP/M unambiguous file name, including the drive reference and file type, such as A:CHEKBOOK.81. It is suggested that you use the last two digits of the checkbook year as the file type.

If you enter a checkbook name which is not found on the drive you specify, the following message appears:

[filename] NOT FOUND ON SPECIFIED DRIVE

1. NEW CHECKBOOK
2. REENTER CHECKBOOK NAME
3. EXIT FROM PROGRAM

NUMBER?

If this is a new checkbook, enter the number 1, and choose your budget categories for this checkbook, as well as enter the beginning checkbook balance.

4.1   BUDGET CATEGORIES

Twenty-five suggested budget categories are displayed on the screen. This display shows expense categories with the lower numbers, followed by revenue categories. You need not follow this convention, and revenue and expense categories may be intermixed. You may have as many as 25 budget categories.

You may tailor these categories to your personal needs by using the BUDGET CATEGORY EDITOR, which can add, delete and change categories. Using the editor, you also specify whether the category is for expenses or revenues.

Users have found it more convenient to enter checkbook items if the lower numbers are assigned to the budget categories used most frequently. The suggested budget categories are in this order.

When you don't assign a checkbook expense to any budget category, the SMART CHECKBOOK automatically assigns it to a special category, "other expenses." Similarly, unassigned revenues are automatically assigned to "other revenues." These special categories are useful for transactions which are neither income nor expense, such as transferring funds from one investment to another. They are in addition to any you may choose, and may be included or excluded from reports, at your option.

It is very important that you take the time to choose budget categories to meet your needs. ONCE YOU START A CHECKBOOK, THE BUDGET CATEGORIES CANNOT BE CHANGED, and remain the same whenever you use the NEWBOOK program to start a checkbook from an old one.

The screen display of the twenty-five suggested budget categories is:

LINE	CATEGORY	TYPE	LINE	CATEGORY	TYPE
1	FOOD	EXPENSE	14	ED & REC	EXPENSE
2	PERSONAL	EXPENSE	15	FURN	EXPENSE
3	CHG CARD	EXPENSE	16	HOUSEHLD	EXPENSE
4	ELECTRIC	EXPENSE	17	INSURANC	EXPENSE
5	FUEL	EXPENSE	18	MEDICAL	EXPENSE
6	GAS	EXPENSE	19	TAXES	EXPENSE
7	LOAN PAY	EXPENSE	20	WATER	EXPENSE
8	PHONE	EXPENSE	21	MISC EXP	EXPENSE
9	RENT/MTG	EXPENSE	22	DIVIDEND	REVENUE
10	SAVINGS	EXPENSE	23	INTEREST	REVENUE
11	TRANSPOR	EXPENSE	24	SALARY	REVENUE
12	CLOTHES	EXPENSE	25	MISC REV	REVENUE
13	CONTRIB	EXPENSE			

THESE ARE SUGGESTED BUDGET CATEGORIES.
PRESS RETURN TO KEEP CATEGORIES OR E TO EDIT CATEGORIES

A return accepts these categories for this checkbook, and you may list the categories on your printer. Enter E if you want to make changes to the categories, and the BUDGET CATEGORY EDITOR menu appears.

If you are a professional or own a small business, the budget categories may be used to keep track of your Schedule C revenues and expenses. For your convenience, Figure 4-1 lists 25 Schedule C items which are likely to appear in your checkbook.

BUDGET CATEGORY EDITOR

```
            BUDGET CATEGORY EDITOR
             1. ADD A CATEGORY
             2. DELETE A CATEGORY
             3. CHANGE A CATEGORY
             4. CHANGE REVENUE/EXPENSE TYPE
            99. EXIT
```

NUMBER?

1. ADD A CATEGORY

This selection lets you add categories to the end of the list when there are fewer than 25 categories. The category may be up to eight characters long. You are prompted:

```
            ADDITIONS TO CATEGORIES
            NEW CATEGORY:
```

You are next prompted for the type:

```
        ENTER R FOR REVENUE OR E FOR EXPENSE
```

After you enter the type, the new category and type are added to the end of the list.

2. DELETE A CATEGORY

This selection deletes an entry. You are prompted:

```
                LINE NUMBER:
```

Respond with the line number of the category to be deleted.

After you enter the line number, the category is displayed on the lower portion of the screen and you are asked:

```
                DELETE ITEM? Y/N
```

A yes response deletes the category and reduces the line number by one of each category with a line number greater than the one deleted. The screen display is also refreshed. You then return to the edit menu.

3. CHANGE A CATEGORY

This selection allows changing any category already entered. You are prompted:

LINE NUMBER:

and then

NEW CATEGORY:

The new category replaces the previous one, but the revenue or expense type remains the same. The screen display is updated and you return to the edit menu.

4. CHANGE REVENUE/EXPENSE TYPE

This selection changes a category type from revenue to expense or expense to revenue. You are prompted:

LINE NUMBER:

and the type is changed and displayed on the screen.

99. EXIT

Enter 99 to exit from the menu.

4.2   BEGINNING CHECKBOOK BALANCE

After you select your budget categories, you are prompted:

ENTER BEGINNING BALANCE:

The BEGINNING BALANCE is the opening balance of the checkbook. If the account is new enter Ø. Otherwise THE BEGINNING BALANCE IS THE CLOSING BALANCE OF THE BANK STATEMENT AT WHICH YOU LAST BALANCED YOUR CHECKBOOK. You should begin your SMART CHECKBOOK when your checkbook is in balance, otherwise, if there are errors in items not on the SMART CHECKBOOK, the SMART CHECKBOOK cannot catch the errors. This may mean going back several months to a month in which your checkbook was in balance or forcing a balance in the current month. Forcing a balance is not recommended, as it may raise unknown errors in the future.

You will then be asked if you want to change the amount you entered. If you respond no, then the MAIN MENU is displayed. If you respond yes, then you are requested to reenter the balance amount.

When the MAIN MENU appears, choose the ENTER ITEMS mode to enter all items that have not yet been returned by the bank, that is, all items still outstanding. As you enter these items, the SMART CHECKBOOK updates the balance in your account.

FIGURE 4-1
SCHEDULE C CATEGORIES
(1980)

1980 SCHEDULE C LINE NUMBER	CATEGORY	TYPE	SUGGESTED BUDGET NAME
1a	Receipts	Revenue	RECEIPTS
4	Other Income	Revenue	OTH INC
6	Advertising	Expense	ADS
9	Bank Charges	Expense	BANK CHG
10	Car and Truck	Expense	AUTO
11	Commissions	Expense	COMMISSN
14	Dues and Publications	Expense	DUES
15	Employee Benefit Programs	Expense	EMPL BEN
16	Freight	Expense	FREIGHT
17	Insurance	Expense	INSURANC
18	Interest on Business Indebtedness	Expense	INTEREST
19	Laundry and Dry Cleaning	Expense	LAUNDRY
20	Legal and Professional Services	Expense	PROF SRV
21	Office Supplies	Expense	OFF SUP
22	Pension and Profit-Sharing Plans	Expense	PENSION
23	Postage	Expense	POSTAGE
24	Rent on Business Property	Expense	RENT
25	Repairs	Expense	REPAIRS
26	Supplies	Expense	SUPPLIES
27	Taxes	Expense	TAXES
28	Telephone	Expense	PHONE
29	Travel and Entertainment	Expense	T & E
30	Utilities	Expense	UTILITY
31a	Wages	Expense	WAGES
32	Other Expenses	Expense	OTH EXP

NOTE: Non-cash expenses, such as depreciation, are not included.

Look at Form 1040 Schedule C to determine if these are the categories that best meet your needs.

SECTION 5: MAIN MENU

The MAIN MENU is the heart of the SMART CHECKBOOK. It lets you choose what you want to do with your checkbook. This includes entering items, writing checks, reconciling the checkbook to a bank statement, editing the checkbook, obtaining the current checkbook balance, listing outstanding items, searching the checkbook for particular items, and producing tables of monthly income and expense. After finishing any of these features you always return to the MAIN MENU.


```
                        MAIN MENU
            1. ENTER ITEMS IN CHECKBOOK
            2. CHECKBOOK EDITOR
            3. CHECKWRITER
            4. RECONCILE CHECKBOOK
            5. CURRENT BALANCE
            6. LIST OUTSTANDING ITEMS
            7. CHECKBOOK SEARCH AND SUM
            8. MONTHLY INCOME AND EXPENSE TABLES
           99. EXIT

NUMBER?
```


You choose a feature by entering its number. You leave the SMART CHECKBOOK by choosing 99.

5.1. ENTER ITEMS IN CHECKBOOK

Choose the ENTER ITEMS mode when you want to enter checks, deposits and charges into your checkbook.

When you begin the ENTER ITEMS mode your current balance appears at the top of the screen, followed by the last entry in the checkbook, if any, in order to tell you where you left off:


```
CURRENT BALANCE IS $403.22
                LAST ITEM ON CHECKBOOK:
ITEM DATE      PAYEE/DESCRIPTION            AMOUNT BUDGET    TAX CAT
1206 11/24/81 Bell Telephone Co.           $72.46 PHONE

PRESS RETURN TO CONTINUE
```

When you press return, the following reminder appears in the lower portion of the screen:

PRESS RETURN TO END INPUT - PRESS CONTROL A TO EDIT PREVIOUS ITEM

When you select the ENTER ITEMS mode, you will be prompted for six categories of information about a checkbook entry:

     (1) Check #, DEPosit or CHARge
     (2) DATE(MM/DD/YY) OR PRESS RETURN FOR PREVIOUS DATE
     (3) PAYEE/DESCRIPTION
     (4) AMOUNT
     (5) BUDGET CATEGORY NUMBER, M FOR MENU OR RETURN FOR NONE
     (6) TAX DEDUCTION NUMBER, M FOR MENU OR RETURN FOR NONE

As you respond to each prompt, the checkbook entry is created on the lower portion of the screen. When the entry is completed, it is written to the checkbook and displayed on the upper part of the screen. The twelve most recent entries of a session are shown at one time. The current checkbook balance appears at the top of the screen and is updated to include the new entry.

Check #, DEPosit or CHARge

This prompt expects one of the following responses:

     Check number
     DEPOSIT
     CHARGE
     CONTROL A (^A)
     RETURN <CR>

CHECK NUMBER

The check number may be from 1 to 4 characters long. It is used as the unique identification of each check. If you are entering a check but don't know its number, any character and number combination (except DEP and CHAR) may be used for temporary identification. The reconciliation mode is designed to help you find the correct number for misnumbered checks.

Any response to the Check #, DEPosit or CHARge: prompt which doesn't start with DEP or CHAR is considered to be a check number.

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DEPOSIT

To enter a deposit or other credit, the word DEPOSIT is entered. The three characters DEP are recorded as identification in the checkbook. Interest earned by NOW accounts is entered as a deposit. The PAYEE/DESCRIPTION may be used to identify the source of the deposit or credit.

CHARGE

To enter a charge or other debit, the word CHARGE is entered. The four characters CHAR are recorded as identification in the checkbook. Checking accounts are often used to pay for various bank services ranging from a monthly maintenance fee to loan repayment. Some banks offer electronic bill paying services. CHARGE may be used to record these payments, as well as cash withdrawals from teller machines, and the PAYEE/DESCRIPTION used to identify the payee. Charges differ from checks in that checks are identified by check number and charges are identified by the date of the transaction.

CONTROL A

Responding to the Check #, DEPosit or CHARge: prompt with a control A (^A) lets you correct the checkbook entry you have just made. The CHANGES menu appears:

                              CHANGES
    1. Check #, DEPosit or CHARge 4. AMOUNT   99. EXIT
    2. DATE   5. BUDGET
    3. PAYEE/DESCRIPTION   6. TAX

Changes are permitted in each of the six categories. The corrected checkbook item is displayed after each change, and the current balance is updated when you change the amount. The menu is repeated after each change until you enter 99 to exit. When you exit from the change mode, the checkbook entry displayed in the upper part of the screen is updated to reflect the changes.

RETURN

Responding to the Check #, DEPosit or CHARge: prompt with a return saves the items you have just entered. You are asked whether you want to edit the items entered in the current session. Respond yes for the checkbook editor. After completing your editing, or if you respond no, you are asked if you want the items listed on the printer. A yes response prompts you to turn on your printer and press return when ready. After the items are printed, or if you answer no, you may save the report on disk. Then you may use the checkwriter to write the checks you have just entered. When you finish writing checks you return to the MAIN MENU.

If you are entering a large number of items, it is good practice to save the items periodically.

DATE(MM/DD/YY) OR PRESS RETURN FOR PREVIOUS DATE

The DATE prompt expects a response of the form month/day/year, such as 10/16/81 or a return. If you press return, the date of the previous item is automatically entered for this item.

The DATE is the key identification for deposits and charges. If the exact date is not known when entering an item, a dummy date of up to 8 characters may be temporarily entered. The RECONCILIATION mode helps identify the correct date when a reconciliation is made to your bank statement.

PAYEE/DESCRIPTION

You may enter an identification of up to 30 characters long to the prompt, PAYEE/DESCRIPTION. Deposits and charges do not need descriptions, but it is useful to identify them.

In addition to including the payee or source of deposit, memo type information may be included, which can be used by the MONTHLY TABLES and SEARCH AND SUM modes.

AMOUNT

The amount prompt expects a response between 0 and 999999.99.

BUDGET CATEGORY NUMBER, M FOR MENU OR RETURN FOR NONE

    If the checkbook entry is a check or charge, you may assign
any of the expense budget categories you established when you
started this checkbook. If the entry is a deposit, you may assign
any of the revenue categories to it. Enter the budget category
number, if you know it, enter M for the menu of budget categories
which apply to this entry, or press return if you do not want to
assign a category.

    The BUDGET CATEGORIES menu displays expense categories if
the entry is a check or charge; revenue categories are displayed
for deposits.

    If the checkbook entry is a deposit, the entry is completed
when the budget category number is entered and the TAX DEDUCTION
prompt does not appear.

TAX DEDUCTION NUMBER, M FOR MENU OR RETURN FOR NONE

    The tax deduction prompt appears if the checkbook entry is a
check or charge. You may assign any one of sixteen tax deduction
categories to an item. These include 6 Schedule A categories, 3
tax credits, 5 deductions from income, Schedule C and other.

    Press return if the item is not tax deductible, otherwise
you may enter the tax deduction number, or M to list the menu of
tax deductions. The following tax deductions menu appears below
the checkbook entry:

                          TAX DEDUCTIONS
    1. MEDICAL   5. CASUALTY   9. ENERGY   13. KEOUGH   99. EXIT
    2. TAXES   6. MISC   10. MOVING   14. ALIMONY
    3. INTEREST   7. POLITIC   11. EMPL BUS   15. SCHED C
    4. CHARITY   8. CHLD CR   12. IRA   16. OTHER

NUMBER?

    Respond with the tax deduction number to the NUMBER prompt,
or 99 for no deduction.

    When you have responded to the tax deduction prompt, the
check or charge entry is completed.

SCREEN DISPLAY

As each checkbook entry is completed it is written to the checkbook and also to the upper portion of the screen. The checkbook balance is updated and displayed at the top of the screen. The twelve most recent entries of a session are displayed on the upper portion of the screen.

```
CURRENT BALANCE IS $242.17
ITEM DATE       PAYEE/DESCRIPTION           AMOUNT BUDGET     TAX CAT
101  10/12/81 BELL TELEPHONE CO            $27.48 PHONE
102  10/12/81 JAMES JONES, M.D.            $25.00 MEDICAL    MEDICAL
DEP  10/12/81 SALARY                     $1100.00 SALARY
103  10/14/81 ELECTRIC CO                  $35.89 ELECTRIC
104  10/14/81 VISA                        $125.23 CHG CARD
???  10/??/81 CASH                         $25.00 PERSONAL
CHAR 10/15/81 AUTO LOAN PAYMENT           $159.00 LOAN PAY   INTEREST
109  10/18/81 AMERICAN EXPRESS             $37.81 CHG CARD
CHAR 10/16/81 MORTGAGE PAYMENT            $723.00 RENT/MTG   INTEREST
107  10/17/81 UNITED FUND                  $25.00 CONTRIB    CHARITY
106  10/15/81 ABC SAVINGS BANK(SAVINGS)   $100.00
108  10/17/81 GORDON'S REFUSE SERVICE      $25.00 HOUSEHLD
```

5.2 CHECKBOOK EDITOR

The CHECKBOOK EDITOR lets you correct or delete any item in the checkbook and may also be used to add new items to the checkbook. (If you are adding many new items, it is more convenient to use the ENTER ITEMS mode.) When you choose the CHECKBOOK EDITOR from the MAIN MENU, a menu is displayed asking you where you want to start editing. You may start at the first item on the checkbook, the last item which was on the checkbook at the time you last reconciled the checkbook, at the earliest outstanding item, or at any line number you specify.

```
                    CHECKBOOK EDITOR
          1.  START WITH FIRST ITEM ON CHECKBOOK
          2.  START WITH ITEM AT LAST BALANCE
          3.  START WITH EARLIEST OUTSTANDING ITEM
          4.  START WITH LINE NUMBER YOU SPECIFY
```

Begin nearest the first item you want to correct to reduce the time spent reading through the checkbook until the desired item is found.

After the starting place is selected, the CHECKBOOK EDITOR displays the items in the order they were entered. Twelve items are displayed at a time. Deleted items are not displayed and may not be accessed through the CHECKBOOK EDITOR.

The current balance is displayed at the top right of the screen and is updated to reflect all additions, deletions and changes to the checkbook.

The line numbers in the left hand column are assigned by the SMART CHECKBOOK and are used by the CHECKBOOK EDITOR to let you change the items in the checkbook.

```
CHECKBOOK  EDITOR                                  CURRENT BALANCE IS $242.17
LINE ITEM DATE      PAYEE/DESCRIPTION         AMOUNT BUDGET     TAX CAT
  25 101  10/12/81  BELL TELEPHONE CO        $27.48 PHONE
  26 102  10/12/81  JAMES JONES, M.D.        $25.00 MEDICAL    MEDICAL
  27 DEP  10/12/81  SALARY                 $1100.00 SALARY
  28 103  10/14/81  ELECTRIC CO              $35.89 ELECTRIC
  29 104  10/14/81  VISA                    $125.23 CHG CARD
  30 ???  10/??/81  CASH                     $25.00 PERSONAL
  31 CHAR 10/15/81  AUTO LOAN PAYMENT       $159.00 LOAN PAY   INTEREST
  32 109  10/18/81  AMERICAN EXPRESS         $37.81 CHG CARD
  33 CHAR 10/16/81  MORTGAGE PAYMENT        $723.00 RENT/MTG   INTEREST
  34 107  10/17/81  UNITED FUND              $25.00 CONTRIB    CHARITY
  35 106  10/15/81  ABC SAVINGS BANK(SAVINGS) $100.00
  36 108  10/17/81  GORDON'S REFUSE SERVICE   25.00 HOUSEHLD

PRESS RETURN TO CONTINUE, E TO EDIT OR X TO EXIT
```

PRESS RETURN TO CONTINUE

The return displays the next group of 12 items. A return
after the last item in the checkbook returns you to the MAIN
MENU.

X TO EXIT

The X exits from the CHECKBOOK EDITOR and returns you to the
MAIN MENU.

E TO EDIT

The E lets you edit the items. The EDIT MENU is displayed in
the lower portion of the screen.

```
                    EDIT MENU
              1. ADD AN ITEM
              2. DELETE AN ITEM
              3. CHANGE AN ITEM
             99. EXIT
```

1. ADD AN ITEM

You are prompted to enter:

Check #, DEPosit or CHARge
DATE(MM/DD/YY)
PAYEE/DESCRIPTION
AMOUNT
BUDGET CATEGORY NUMBER, M FOR MENU OR RETURN FOR NONE

and if the item is not a deposit,

TAX DEDUCTION NUMBER, M FOR MENU OR RETURN FOR NONE

Items entered in the CHECKBOOK EDITOR are added to the end of the checkbook. The current balance is updated to include the new item, and if there is room on the screen, the new item is written on the current screen, otherwise it appears with the last group of items. After entering an item, you return to the EDIT MENU.

2. DELETE AN ITEM

Checkbook items are not physically removed from the checkbook, but instead are coded to be bypassed by all checkbook functions except when specifically requested in the SEARCH AND SUM mode. When you choose to delete an item you are prompted

LINE NUMBER:

Respond with the line number which appears on the left side of the screen next to the item you want to delete. The item with that line number is displayed in the lower portion of the screen for your verification. You are asked

DELETE ITEM? Y/N

A yes response flags the item DELETED, removes it from the upper portion of the screen, updates the current balance, and returns you to the EDIT MENU. A response of no leaves the item unchanged and returns you to the EDIT MENU.

3. CHANGE AN ITEM

When you want to change an item, you are asked for the line number of the item to be corrected.

LINE NUMBER:

Respond with the line number which appears to the left of the item you want to change. The item is displayed on the lower portion of the screen and the CHANGES menu is presented.

```
                      CHANGES
    1. Check #, DEPosit or CHARge  4. AMOUNT        99. EXIT
    2. DATE                        5. BUDGET
    3. PAYEE/DESCRIPTION           6. TAX
```

Changes are permitted in each of the six categories, and the corrected item is displayed after each change. Whenever you change an amount, or if you change a deposit to a check or charge (or vice versa), the current balance is updated.

The CHANGES menu reappears until you exit from it. At this point the changed item is written on the checkbook, and if the original item is on the screen display, the corrected item appears in its place. You then return to the EDIT MENU.

99. EXIT

When you exit from the EDIT MENU, the "PRESS RETURN TO CONTINUE, E TO EDIT OR X TO EXIT" prompt is repeated.

5.3 CHECKWRITER

The CHECKWRITER prepares professional looking checks, with the amount written in both words and numbers. Memos may be written on any checks, and frequently used memos, such as credit card account numbers, may be written on checks without reentering the memo. Checks may be written in the ENTER ITEMS mode or when you choose the CHECKWRITER from the MAIN MENU. There are a variety of check styles to choose from.

If you have not entered your choice of check form for a checkbook, the CHECK FORM MENU automatically appears for you to select the form you want. The CHECK FORM MENU is given in Appendix C, which also contains sample check forms and order blanks for these forms.

When you use the checkwriter in the ENTER ITEMS mode, the CHECKWRITER writes the checks you have just entered which have a valid date, a payee, and an amount. You may also choose which of these checks you want written. Before the checks are written, the CHECKWRITER OPTIONS appear. They are explained below.

When you choose the CHECKWRITER from the MAIN MENU, the CHECKWRITER MENU appears:

```
                    CHECKWRITER MENU

         1.  REVIEW OUTSTANDING CHECKS AND SELECT FOR WRITING
         2.  SELECT RANGE OF CHECK NUMBERS FOR WRITING
         3.  SELECT RANGE OF LINE NUMBERS FOR WRITING
         4.  CHANGE CHECK FORM
         5.  LIST AND EDIT MEMO FILE
         6.  PRINT MEMO FILE
        99.  EXIT
```

1. REVIEW AND SELECT OUTSTANDING CHECKS

Enter 1 to select specific checks to be written or if you are not sure of the check or line number range.

The title, REVIEW OUTSTANDING CHECKS, appears at the top of the screen, followed by a list of outstanding checks, starting with the earliest outstanding check. If you exited from the RECONCILE mode without balancing the checkbook, checks which were matched to returned checks are treated by the CHECKWRITER as returned.

```
                    REVIEW OUTSTANDING CHECKS
LINE ITEM DATE       PAYEE/DESCRIPTION           AMOUNT BUDGET     TAX CAT
  25 101  10/12/81  BELL TELEPHONE CO           $27.48 PHONE
  26 102  10/12/81  JAMES JONES, M.D.           $25.00 MEDICAL    MEDICAL
  28 103  10/14/81  ELECTRIC CO                 $35.89 ELECTRIC
  29 104  10/14/81  VISA                       $125.23 CHG CARD
  30 ???  10/??/81  CASH                        $25.00 PERSONAL
  32 109  10/18/81  AMERICAN EXPRESS            $37.81 CHG CARD
  34 107  10/17/81  UNITED FUND                 $25.00 CONTRIB    CHARITY
  35 106  10/15/81  ABC SAVINGS BANK(SAVINGS) $100.00
  36 108  10/17/81  GORDON'S REFUSE SERVICE      25.00 HOUSEHLD
```

                    END OF LIST
PRESS RETURN TO CONTINUE, S TO SELECT OR X TO EXIT

Twelve outstanding checks are displayed at a time. When the last group of outstanding checks is displayed, the message END OF LIST appears. At the end of each display you are prompted:

PRESS RETURN TO CONTINUE, S TO SELECT OR X TO EXIT

PRESS RETURN TO CONTINUE

When you press return, the next group of twelve checks is displayed. If you are at the end of the list and you have not selected any checks for writing, pressing return takes you back to the CHECKWRITER MENU. You may then select a range of check or line numbers to write. If you have selected any checks, pressing return displays CHECKWRITER OPTIONS.

S TO SELECT

Enter S to select a check for writing. You may write any outstanding check which has a valid date, a payee and an amount. You are asked for the line number of the check to be written:

ENTER LINE NUMBER OR PRESS RETURN FOR NO SELECTION

If you press return, you return to the review of outstanding checks, otherwise enter the line number. The check you select is displayed on the lower portion of the screen for your verification. You are asked:

WRITE CHECK? Y/N

If you answer yes, a # appears between the line number and check number on the upper portion of the screen and the explanation "# SELECTED" at the bottom of the display. Checks are written after you select all the checks you want written.

After each selection, the prompt "PRESS RETURN TO CONTINUE, S TO SELECT OR X TO EXIT" is repeated.

X TO EXIT

If you have not selected any checks for writing, X takes you back to the CHECKWRITER MENU, and you may then select a range of check numbers or line numbers to write. If you have selected any checks, X ends the review and displays CHECKWRITER OPTIONS.

2. SELECT RANGE OF CHECK NUMBERS FOR WRITING

Enter 2 if you know the range of check numbers of the checks you want to write. You do not have to write all the checks in this range. The following reminder appears at the top of the screen:

SELECT BEGINNING AND ENDING CHECK NUMBERS

You are asked for the beginning check number:

ENTER BEGINNING CHECK NUMBER OR PRESS RETURN FOR CHECKWRITER MENU

If you press return, the CHECKWRITER MENU is repeated, otherwise enter a number of 1 to 4 digits. This number is displayed.

BEGINNING CHECK NUMBER IS [number]

You are then asked for the ending check number:

ENTER ENDING CHECK NUMBER OR PRESS RETURN FOR BEGINNING NUMBER

If you press return, you limit the checkwriting to a single check number, otherwise the number you enter must be higher than the beginning number. The ending number is also displayed.

ENDING CHECK NUMBER IS [number]

You are asked if you want to change the numbers:

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DO YOU WANT TO CHANGE THE CHECK NUMBERS? Y/N

A no response displays CHECKWRITER OPTIONS described below.

3. SELECT RANGE OF LINE NUMBERS FOR WRITING

Enter 3 if you know the range of line numbers of the checks you want to write. Line numbers are assigned by the SMART CHECKBOOK to each item in your checkbook. The following reminder appears at the top of the screen:

SELECT BEGINNING AND ENDING LINE NUMBERS

You are asked for the beginning line number:

ENTER BEGINNING LINE NUMBER OR PRESS RETURN FOR CHECKWRITER MENU
(NUMBER MUST BE BETWEEN [earliest outstanding] AND [last checkbook entry])

If you press return, the CHECKWRITER MENU is repeated, otherwise enter a number between the limits shown in the message. The number you enter is displayed:

BEGINNING LINE NUMBER IS [number]

You are then asked for the ending line number:

ENTER ENDING LINE NUMBER OR PRESS RETURN FOR BEGINNING NUMBER
(NUMBER MUST BE BETWEEN [beginning number] AND [last checkbook entry])

If you press return, you limit the checkwriting to the single line number, otherwise the number you enter must be higher than the beginning number. The ending number is also displayed.

ENDING LINE NUMBER IS [number]

You are asked if you want to change the numbers:

DO YOU WANT TO CHANGE THE LINE NUMBERS? Y/N

If you respond no, the CHECKWRITER OPTIONS display appears.

4. CHANGE CHECK FORM

Enter 4 if you want to change the check form you have chosen or if you want to verify which check form has been chosen for the checkbook.

The current check form is displayed at the top of the screen:

CHECK FORM SELECTED:[check form]

This is followed by the CHECK FORM MENU, which is in Appendix C. You are prompted for the menu number. Enter the number of your new check form or 99 to keep the current check form. The form you select is displayed for you to verify.

YOU HAVE SELECTED [check form]
DO YOU WANT TO CHANGE THIS? Y/N

Answer yes if you want a different selection, and the number prompt is repeated. Answer no to record your selection in the checkbook and to return to the CHECKWRITER MENU.

5. LIST AND EDIT MEMO FILE

Enter 5 if you want to review or alter the memo file. Memo information for a checkbook is kept in a memo file associated with the checkbook. Frequently used memos need only be entered once and can be written on the appropriate checks automatically. You may also use the memo file to hold memos which will be used only once for unattended checkwriting.

You may have up to 36 memos on file at any time. Twelve payees and corresponding memos are displayed on the screen followed by the prompt

PRESS RETURN TO CONTINUE, E TO EDIT OR X TO EXIT

PRESS RETURN TO CONTINUE

Press return to display the next group of twelve memos. When all the memos have been displayed, pressing return repeats the CHECKWRITER MENU.

E TO EDIT

        Enter E to edit the payees or memos. The EDIT MENU appears.
You may add a payee and memo if there are fewer than 36 memos on
file. You may delete a payee-memo, you may change any payee or
memo already filed, or you may exit to repeat the prompt.

                        EDIT MENU
                     1. ADD AN ITEM
                     2. DELETE AN ITEM
                     3. CHANGE AN ITEM
                    99. EXIT

X TO EXIT

        Enter X to return to the CHECKWRITER MENU.

6. PRINT MEMO FILE

        Enter 6 to print the memo file on your printer or on disk.
If you print the information on your printer, make sure that
there is plain paper, and not check forms, in your printer.

CHECKWRITER OPTIONS

When you choose to write the checks you have just entered in the ENTER ITEMS mode, or after you select checks for writing in the CHECKWRITER mode, the checkwriter options are displayed:

CHECKWRITER OPTIONS

Each check is displayed on the screen before it is written
Checks with invalid dates, blank payees or zero amounts are not written
You may write a memo on any check

STANDARD   OPTION

Verify check before writing   C=DO NOT verify check before writing
Pause after error messages   P=DO NOT pause after error messages
Write a memo   W=DO NOT write a memo
Verify memo before writing   M=DO NOT verify memo before writing

ENTER OPTIONS OR PRESS RETURN FOR NO OPTIONS

Press return to use the standard checkwriter features, otherwise enter all the options you want. Use the CPM options if you want to write memos on checks in unattended checkwriting; use the CPW options for unattended checkwriting without memos.

The features you choose are shown and you are asked:

DO YOU WANT TO CHANGE THE OPTIONS? Y/N

Verify check before writing C=DO NOT verify check before writing

If you are writing a range of checks, all the checks in that range do not have to be written. The standard checkwriter feature displays the check to be written on the lower portion of the screen, and you are asked

WRITE CHECK? Y/N

If you answer no, the check is displayed on the upper portion of the screen with * between the line number and check number to indicate that it was not written. The explanation, * NOT WRITTEN, also appears on the screen. If you answer yes, the check is written and then displayed on the upper portion of the screen. The twelve most recent checks are shown at one time.

If you select specific checks for writing using the REVIEW AND SELECT choice of the CHECKWRITER MENU, you may prefer to write each check without being asked. In this case, select the C option. Each check is displayed on the lower portion of the screen while it is being written, and on the upper portion of the screen after it is written.

Pause after error messages   P=DO NOT pause after error messages

If there are checks with errors, the standard displays PRESS RETURN TO CONTINUE after the diagnostic message. If you do not want this pause, select the P option.

Write a memo   W=DO NOT write a memo

The standard checkwriter feature lets you write a memo on any check. If you do not want to write any memos, select the W option.

Verify memo before writing   M=DO NOT verify memo before writing

If you choose to write a memo on a check, the memo file is searched and the memo for that payee is displayed. If there is no memo on file for that payee, NO MEMO FOUND is displayed. The standard asks if you want to reenter the memo (or enter one, if none was found). If you do not want to reenter the memo, the one found is written on the check. If you reenter the memo, the new memo is written on the check and you may also file it, replacing the existing memo on file.

If you want the checkwriter to take memos automatically from the memo file without being able to override the memos, choose the M option.

If you choose the W option, the M option has no effect.

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WRITING CHECKS DIRECTLY ON THE PRINTER

You can print checks directly on your printer or write the check images on disk for later printing. The CHECKWRITER uses continuous check forms. The first time in a session there is a check to be written, if you are printing directly on the printer the CHECKWRITER helps you align the check forms for proper printing. The following messages appear:

> INSERT CHECKS IN PRINTER
> ALIGN PRINT HEAD WITH THE TOP OF FORM
> TURN ON PRINTER. PRESS RETURN WHEN READY

When you press return you are asked:

DO YOU WANT TO WRITE A SAMPLE CHECK TO TEST THE ALIGNMENT? Y/N

If you answer yes, a sample check is printed. This test uses up one check form, but insures that your actual checks are printed properly. The sample check prints "VOID" for the check number, "SAMPLE CHECK TO TEST ALIGNMENT" for the payee, "SAMPLE MEMO TO TEST ALIGNMENT" for the memo, $42.65 for the amount, and uses the date of the first actual check you want to write.

When you become familiar with positioning the check forms in your printer, you may not want to write a sample check.

While the sample check is being written, the message

> PRESS ANY KEY TO STOP CHECKWRITER

appears on the screen. If you press any key, the checkwriter stops writing the sample check, and the CHECKWRITER STOP MENU, described below, appears. After the sample check has been written, or if you enter 2 to the STOP menu, you are prompted:

PRESS RETURN TO WRITE CHECK, R TO RETEST ALIGNMENT OR X TO EXIT

Press return if the forms are aligned properly.

Enter R to repeat the alignment test, starting with the prompt to insert the checks in the printer.

Enter X to bypass writing checks. You return to the MAIN MENU if you are in the ENTER ITEMS mode, otherwise you return to the CHECKWRITER MENU.

When the forms are positioned properly, or if you did not write a sample check, the CHECKWRITER begins writing the first check, and the reminder, PRESS ANY KEY TO STOP CHECKWRITER, appears on the screen

You may press any key to stop the checkwriter while it is printing. The CHECKWRITER STOP MENU appears.

                    CHECKWRITER STOP MENU

           1. CONTINUE WRITING THIS CHECK
           2. RESUME WRITING WITH NEXT CHECK
          99. EXIT

You may use the stop to adjust the forms, to stop writing the current check, or to stop writing the checks altogether.

Enter 1 to continue the current check where you left off.

Enter 2 to stop writing the current check and resume writing with the next check. The current check is displayed on the upper portion of the screen with * between the line and check numbers. You are again prompted to align the check forms.

Enter 99 to stop writing checks altogether. You return to the MAIN MENU if you are in the ENTER ITEMS mode, otherwise you return to the CHECKWRITER MENU.

CHECK WRITING COMPLETED

                         .

After all the checks you selected have been written, the following messages are displayed on the lower portion of the screen.

              CHECK WRITING COMPLETED
              [number] CHECKS WRITTEN
              <[number] BYPASSED>
              <[number] WITH ERRORS NOT WRITTEN>
              PRESS RETURN TO CONTINUE

The number of checks written always appears, even if no checks were written.

If you chose not to write some checks, or if you used the CHECKWRITER STOP MENU to stop writing a check and resumed with the next check, the total number of such checks is the number bypassed.

If any checks had errors, including invalid date, no payee or zero amount, the number of checks with errors is displayed. These checks are not written. If you selected the P option, these checks are displayed when you press return.

If there were no checks found in the range you specified, the following message is displayed instead:

NO CHECKS FOUND
PRESS RETURN TO CONTINUE

If you wrote the checks in the ENTER ITEMS mode, you return to the MAIN MENU, otherwise the CHECKWRITER MENU is repeated.

5.4. RECONCILE CHECKBOOK

The RECONCILIATION mode is a unique feature of the SMART CHECKBOOK. It has many features designed to help correct the day to day errors that creep into everyone's checkbook. The most common of these are not knowing the check number when entering a check, entering a wrong amount, entering duplicate items, and forgetting to enter an item at all. The SMART CHECKBOOK effortlessly guides you through correcting these and other errors. If the reconciliation process should be interrupted or take longer than anticipated, the reconciliation information does not have to be reentered but can be saved and the reconciliation restarted at any time.

Bank statements must be reconciled in the order they are received from the bank. You will not be able to balance the checkbook if you try to reconcile a bank statement for any month if the previous month's statement has not been reconciled.

Banks are responsible for a very small percentage of errors in account reconciliations, however the SMART CHECKBOOK has built in traps to make it easy to catch them when they do occur.

Before reconciling your checkbook it is strongly recommended that you make a backup copy of your checkbook, preferably on a separate diskette. You may use the CP/M PIP utility to make the backup copy.

5.4.1 STATEMENT INFORMATION

When you enter the RECONCILIATION mode you are asked:

HAVE YOU RECEIVED A NEW BANK STATEMENT? Y/N

Respond yes if-

You have received a new bank statement.

You have not reconciled your last statement and have not saved the information or do not want to use the saved information.

Respond no if-

You want to restart the reconciliation with previously saved information. See Section 5.4.6, SAVING AND RESTARTING THE RECONCILIATION SESSION for details.

If you answer yes, you are asked for information about the statement, and then you enter the returned items, first checks, then deposits, then charges.

You are prompted for four statistics which should appear on your bank statement: the statement date, the number of checks and charges (debits) returned, the number of deposits (credits) returned, and the ending balance of the statement.

STATEMENT DATE

The STATEMENT DATE appears on the statement, usually as "balance as of mm/dd/yy ." The statement date is crucial to the operation of the SMART CHECKBOOK and only one statement can have a given date. IMPORTANT: If you should end a reconciliation session without the checkbook balancing, and not save the statement information or choose not use the RESTART feature when starting the reconciliation again, you MUST use the same bank statement date or the checkbook cannot be balanced.

NUMBER OF CHECKS AND CHARGES (DEBITS) RETURNED

A debit item is an item that results in a decrease in your account balance. The number of debits is the total number of checks and charges appearing on the statement. This item usually appears on a bank statement.

NUMBER OF DEPOSITS (CREDITS) RETURNED

A credit is an item that results in an increase in your account balance. These will usually be deposits, but may also be other items such as interest payments earned by checking accounts that pay interest (NOW accounts). The total number of credits to an account for a month usually appears on a bank statement.

ENDING BALANCE ON STATEMENT

The ending balance always appears on a bank statement and is the amount which is reconciled with the SMART CHECKBOOK.

ANY CHANGES?

If you want to make changes, you are prompted for the items you want to change. After making the change, you enter the RETURNED ITEMS mode. If there are no changes, you go directly to the RETURNED ITEMS mode.

5.4.2 ENTER RETURNED ITEMS

In the ENTER RETURNED ITEMS mode you enter all checks, followed by all charges, and then all deposits and other credits. You may have up to 200 returned checks (100 for systems less than 54K), 50 returned charges and 50 returned deposits. After entering each type of item, such as checks, its total is displayed. You should compare this total to your statement to insure that you have entered all items of that type, to make sure that you haven't transposed a number while entering an item, and also to insure that the bank's computer hasn't made a mistake. The totals generally appear on a bank statement.

The SMART CHECKBOOK counts the number of items in each category entered and compares the result to the number of items in this category in the STATEMENT STATISTICS to make sure that you have entered all items, that the bank has returned all items and that the bank has not returned extra items.

When the ENTER RETURNED ITEMS mode begins, the following message appears at the top of the screen:

```
            CHECKS ON STATEMENT
    LINE   CHECK NUMBER        AMOUNT
```

You are prompted for the check number and amount. The SMART CHECKBOOK assigns the line number.

CHECK NUMBER

This prompt expects one of the following responses:

A check number
CONTROL A (^A)
RETURN

A CHECK NUMBER

A check number must be a number of 1 to 4 digits. This number is used as unique identification to match checks on the SMART CHECKBOOK. Because you now know the actual check numbers, the RECONCILIATION mode only accepts numbers for returned check identification.

Many banks return your actual checks. You enter the CHECK NUMBER and AMOUNT one check at a time. The checks NEED NOT be entered in sequence. Some banks do not return checks and instead only provide a list of checks on their statements. If your bank does not return checks, enter the items listed as they appear on your statement.

CONTROL A

When you press control A the RETURNED CHECK CHANGES menu is displayed, and you can correct the last returned check you entered. See Section 5.4.5, RETURNED ITEMS EDITOR for details.

RETURN

Responding to the CHECK NUMBER prompt with a return takes you out of the ENTER RETURNED CHECKS mode and the following message is displayed:

        TOTAL OF CHECKS RETURNED WITH STATEMENT [$amount]
        PRESS RETURN TO CONTINUE

The amount should be checked against your bank statement to verify that there are no errors. When you press return you are prompted to enter returned charges.

AMOUNT

The amount prompt expects a response between Ø and 999999.99.

SCREEN DISPLAY

As the check number and amount are entered, they appear on the lower portion of the screen. After both items are entered, the numbers are displayed on the upper portion of the screen. The twelve most recently entered returned items are displayed on the upper portion of the screen.

CHARGES

After entering the returned checks, the following message appears:

```
                 CHARGES ON STATEMENT
        LINE    CHARGE DATE          AMOUNT
```

You are prompted for the charge date and amount.

CHARGE DATE

The CHARGE DATE prompt expects a response of the form
mm/dd/yy, such as 12/14/81. Since you now know the exact date of
the transaction, the date must be a valid date. The date entered
here is used to match charges appearing on the SMART CHECKBOOK.

If you respond with a control a (^A), you may change the
previous charge entered, and if you respond with a return, you
leave the CHARGES mode. As with returned checks, the total of
returned charges is displayed, and also the total of both the
returned checks and charges.

After you enter a date, you are prompted for the AMOUNT.

DEPOSITS

After entering the returned charges, you enter the returned
deposits. You are prompted for DEPOSIT DATE and AMOUNT. When
leaving the DEPOSITS mode you receive the total of all deposits.

After you enter the returned deposits, you may review and
edit the returned checks, charges and deposits by answering yes
to the question:

        DO YOU WANT TO EDIT THE RETURNED ITEMS? Y/N

First the returned checks are displayed in groups of 12. You
may correct them as each group is displayed. See Section 5.4.5
RETURNED ITEMS EDITOR for details. In the RETURNED ITEMS EDITOR,
the total amount of the returned checks and the total of checks
and charges are displayed on the first line of the screen and are
updated as changes are made. If the total amounts do not agree
with the bank statement, you can use this display to uncover any
errors you may have made.

Next returned charges are similarly displayed, and then
returned deposits.

After you finish editing, or if you choose not to edit, you
are asked if you want the returned items listed on the printer.

COMPARING THE NUMBER OF RETURNED ITEMS

    At this point the SMART CHECKBOOK automatically compares the
number of checks and charges you have entered to the number of
these items specified in the STATEMENT STATISTICS. The number of
deposits is similarly compared. If the numbers agree, the
reconciliation process begins. If there is a disagreement in the
number of checks and charges, a message is displayed:

YOUR STATEMENT SHOWS [#] CHECKS AND CHARGES BUT YOU ENTERED [#]

    This is followed by a menu allowing corrections:

                1. RETURNED ITEMS EDITOR
                2. STATEMENT ITEM EDITOR
                99. SAVE RETURNED ITEMS AND/OR EXIT

    If there is a disagreement in the number of deposits, a
similar message is displayed:

YOUR STATEMENT SHOWS [#] DEPOSITS (CREDITS) BUT YOU ENTERED [#]

    This is followed by the same menu.

    At this point, verify that you did not enter the wrong
number of debits and/or credits. Use the RETURNED ITEMS EDITOR to
review the returned items and add or delete entries as needed.
See Section 5.4.5 RETURNED ITEMS EDITOR for details. Make any
corrections to the STATEMENT STATISTICS using the STATEMENT ITEM
EDITOR. See Section 5.4.4 for details. After any necessary
corrections are made, the SMART CHECKBOOK again compares the
number of checks and charges and deposits before progressing into
the reconciliation phase.

    If you want to leave the SMART CHECKBOOK at this point, you
have the option of saving the items you have already entered by
specifying 99. See Section 5.4.6 SAVING AND RESTARTING THE
RECONCILIATION. If you have a large number of returned items to
enter, you may want to save the information periodically.

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5.4.3 RECONCILIATION PROCESS

Once the number of returned items agrees with the STATEMENT STATISTICS, the reconciliation scan begins and the message:

..... WORKING .....

is displayed.

5.4.3(a) CHECKBOOK BALANCES

If the checkbook is successfully reconciled with the bank statement, the balance message appears.

CHECKBOOK BALANCES!
CURRENT BALANCE IS   [$amount]

This message is followed by lists and totals of outstanding checks, deposits and charges, which you may also list on the printer. You then return to the MAIN MENU.

5.4.3(b) CHECKBOOK OUT OF BALANCE

If all returned items have been correctly matched to items on the checkbook, but the checkbook does not reconcile with the bank statement, the following message is displayed:

CHECKBOOK OUT OF BALANCE

VERIFY THESE ITEMS WITH THIS MONTH'S AND LAST MONTH'S STATEMENTS
OPENING BALANCE IS (LAST MONTH'S ENDING BALANCE)......[$amount]
   MINUS: SUM OF CHECKS AND CHARGES (DEBITS) RETURNED..[amount]
   PLUS: SUM OF DEPOSITS (CREDITS) RETURNED...........[amount]

ENDING BALANCE IS.....................................[$amount]
COMPUTED STATEMENT BALANCE IS.........................[$amount]
THE DIFFERENCE IS [$amount]
SEE SECTION 5.4.3(b) OF MANUAL FOR FURTHER INSTRUCTIONS

You are asked if you want to list the OUT OF BALANCE display on your printer. This display is followed by the OUT OF BALANCE MENU.

REASONS FOR AN OUT OF BALANCE CONDITION

Your checkbook is out of balance if there is a disagreement between the amount you entered for the ending balance on the bank statement and the amount computed by the SMART CHECKBOOK after it has matched all the items on your bank statement with the checkbook.

Identify which of the problems described below caused the out of balance condition and, using the procedures detailed there, select the appropriate functions from the OUT OF BALANCE MENU.

```
                   OUT OF BALANCE MENU
            1. RETURNED ITEMS EDITOR
            2. CHECKBOOK EDITOR
            3. STATEMENT ITEM EDITOR
            4. LIST OUTSTANDING ITEMS
            5. TRY RECONCILING AGAIN
           99. SAVE RETURNED ITEMS AND/OR EXIT
```

WRONG BALANCE ENTERED

The most likely error to produce the out of balance condition is that you have entered the ending balance incorrectly in the STATEMENT STATISTICS. Check the number listed as "ENDING BALANCE" to the number given on your bank statement. If the two disagree, use the STATEMENT ITEM EDITOR to correct the ending balance, and then try reconciling again.

CREDITS AND DEBITS NOT ENTERED

Another cause of the out of balance condition is that you may have forgotten to enter bank service charges and/or interest earned in both the checkbook and in the returned items, and also the count of the number of returned debits and/or credits did not include service charges and/or interest earned. Because this means making three separate errors, it is not likely to be the cause of an out of balance error, but if it is, use the RETURNED ITEMS EDITOR to enter the returned items, the CHECKBOOK EDITOR to add these items to the checkbook and the STATEMENT ITEM EDITOR to correct the number of returned items. Then try reconciling again.

RESTARTING RECONCILIATION WITH A DIFFERENT DATE

If you had previously attempted to reconcile your checkbook and received the "..... WORKING ....." message, the next time you try to reconcile your checkbook and bank statement you must use the same statement date as before. If you did not enter the same statement date, the checkbook will not balance. Choose 99, but DO NOT save the returned items. Then exit from the SMART CHECKBOOK and reconstruct your checkbook.

RECONCILING A LATER STATEMENT BEFORE AN EARLIER ONE

Statements must be reconciled in statement date order. If you reconcile a statement successfully and then try to reconcile an earlier bank statement, the earlier statement cannot be reconciled with the checkbook, because items which were marked as returned would have been outstanding on the earlier statement. Choose 99 from the OUT OF BALANCE MENU, and save the returned items. Then exit from the SMART CHECKBOOK and reconstruct your checkbook.

BANK ERRORS

It is possible that your bank may have made an error. Compare the ending balance on the previous month's bank statement with the amount given as "OPENING BALANCE IS (LAST MONTH'S ENDING BALANCE)." If the two numbers do not agree, then this is a bank error. You may list this information on the printer to show your bank, and when the OUT OF BALANCE menu appears, choose 99 to save the returned items before you exit from the reconciliation mode.

The bank may have credited or debited your account, but did not itemize this amount on your statement. This is a bank error. You may list the out of balance information on your printer, and when the OUT OF BALANCE menu appears, list the outstanding items before you choose to save the returned items and exit from the RECONCILIATION mode. If you can find an outstanding item equal to the amount shown as "THE DIFFERENCE IS," then this item may have been the one credited to or debited from your account.

USING ANOTHER PROGRAM TO EDIT THE CHECKBOOK

If you used any program other than the SMART CHECKBOOK to write anything on the checkbook, it is extremely likely that this caused the out of balance error. The SMART CHECKBOOK uses various pointers and amounts which it updates whenever you change the checkbook. If you used some other program to change the checkbook, the pointers and amounts are likely to point to the wrong place and contain the wrong amounts. If this is the cause of the out of balance error, you will have to reconstruct the checkbook from a backup copy. [NOTE: You may use CP/M utility programs such as PIP to back up the checkbook.] When the OUT OF BALANCE MENU appears, choose 99 to save the returned items you have entered for later use with the reconstructed checkbook. After you save the returned items, you return to the MAIN MENU. Choose 99 to exit from the SMART CHECKBOOK, and then reconstruct the checkbook.

HARDWARE FAILURE

Other sources of the OUT OF BALANCE error are hardware failures, such as disk errors, memory errors or power failure, in particular, if there had been a power failure while you were editing the checkbook, and it occurred between the time the edited record was written on the checkbook and the time pointers and amounts were updated (a period of only milliseconds). If you had such a power failure (which is an extremely unlikely situation), you will have to reconstruct the checkbook.

If the hardware failure is a disk error, choose 99 when you get the OUT OF BALANCE MENU, but you probably will not want to save the returned items, since there may be problems when writing on the disk. You will also want to reconstruct the checkbook after you have had your disk drive tested and cleared up any hardware problems.

If you are having problems with computer memory, choose 99 when you get the OUT OF BALANCE MENU. You may save the returned item for later use, if you wish, but if you have trouble using them subsequently, you should start afresh. Choose 99 when you return to the MAIN MENU to exit from the SMART CHECKBOOK. After you have had the computer memory tested and corrected, you may run the SMART CHECKBOOK, and reconcile your checkbook.

RECONSTRUCTING YOUR CHECKBOOK

To reconstruct your checkbook, first take your last backup copy of the checkbook and make a backup copy of it. Then using the ENTER ITEMS mode of the SMART CHECKBOOK add the checks, charges and deposits made since that backup. After you enter the items, exit from the SMART CHECKBOOK and make a backup copy of the new checkbook before proceding. Next, use the RECONCILE mode to reconcile your bank statement with the reconstructed checkbook. If you have more than one bank statement, be sure to reconcile the earliest statement first.

5.4.3(c) CANNOT RECONCILE CHECKBOOK AND BANK STATEMENT

A unique feature of the SMART CHECKBOOK is its ability to find errors on your checkbook, diagnose them, and help you correct them. When all the items returned with a statement cannot be matched to the checkbook, the SMART CHECKBOOK summarizes the problems, then gives you the details about the items which cause each problem, and lets you correct the items as they are displayed.

The summary messages begin:

CANNOT RECONCILE BECAUSE

followed by one or more diagnostic messages:

There are CHECKS returned but not on the checkbook
There are DEPOSITS returned but not on the checkbook
There are DISAGREEMENT in amount between RETURNED CHECK and CHECKBOOK
There are CHARGES returned but not on the checkbook
There are DUPLICATE CHECKS on the checkbook

These messages are followed by:

THE FOLLOWING ITEMS WILL BE LISTED TO AID IN CORRECTIONS.

The appropriate messages are then displayed:

CHECKS returned but not on the checkbook
DEPOSITS returned but not on the checkbook
DISAGREEMENT in amount between RETURNED CHECK and CHECKBOOK
CHARGES returned but not on the checkbook
DUPLICATE CHECKS on the checkbook
Items still OUTSTANDING
All RETURNED ITEMS

YOU MAY EDIT THE RETURNED ITEMS AND THE CHECKBOOK

To get a printed copy of each list, answer yes to the prompt:

DO YOU WANT THESE ITEMS LISTED ON THE PRINTER? Y/N

You are then prompted:

TURN ON PRINTER. PRESS RETURN WHEN READY
OR PRESS ESCAPE TO PRINT WITHOUT PAUSING

Press escape only if you want the lists printed without pausing for editing.

These messages are followed by the appropriate lists.

THE FOLLOWING RETURNED ITEMS ARE NOT ON THE CHECKBOOK

All returned checks are displayed for which no check number was found on the checkbook.

Bank charges for which there was no correspondence in both transaction date and dollar amount are considered as not on the checkbook, and are displayed here.

All deposits appearing as returned items for which there was no correspondence of both transaction date and dollar amount are also listed here. If, as frequently happens, the date of a deposit on the checkbook is not the same as on the bank statement, the checkbook date may be corrected later, in the list of outstanding items, or by using the CHECKBOOK EDITOR. NOTE: Deposit dates may differ because deposits made after close of business (usually 3:00 P.M.) are usually entered by the bank as occurring on the next business day.

Another possible reason for a no match is that the checkbook may have a check with a dummy check number or a deposit or charge with a dummy date. Items with dummy identification appear in the lists of outstanding items, and you may correct them as the lists appear.

Of course, like most people, you may have forgotten to enter some items in your checkbook.

The following examples of the displays appear if those items are not on the checkbook. Up to twelve items are displayed at a time.

```
THE FOLLOWING RETURNED CHECKS ARE NOT ON THE CHECKBOOK
LINE  CHECK NUMBER          AMOUNT
   2  1127                  $50.62
  15  1150                 $187.94
  24  1164                   $9.75

PRESS RETURN TO CONTINUE


THE FOLLOWING RETURNED CHARGES ARE NOT ON THE CHECKBOOK
LINE  CHARGE DATE           AMOUNT
   1  9/26/81               $25.00
   2  10/1/81               $42.57

PRESS RETURN TO CONTINUE


THE FOLLOWING RETURNED DEPOSITS ARE NOT ON THE CHECKBOOK
LINE  DEPOSIT DATE          AMOUNT
   5  9/12/81               $65.27
   9  10/3/81              $157.94

PRESS RETURN TO CONTINUE
```

THE FOLLOWING CHECKS DISAGREE IN AMOUNT

A common source of errors in maintaining a checkbook is entering the wrong dollar amount. This can occur for deposits and charges as well as checks. The reconciliation mode compares all returned items to the outstanding entries in the checkbook. For checks, this is accomplished by matching the check number. If the amounts do not match, the error is noted and the item listed:

```
THE FOLLOWING CHECKS DISAGREE IN AMOUNT
CHECK           CHECKBOOK            RETURNED
NUMBER    LINE      AMOUNT     LINE      AMOUNT
1128      325       $12.48     15        $12.84
1138      342      $245.67     19       $254.67

PRESS RETURN TO CONTINUE
ENTER C TO CHANGE CHECKBOOK ITEM OR R TO CHANGE RETURNED ITEM
```

Determine which is the correct amount by looking at the amount on the actual check (or if the bank does not return your checks, verify which entry is correct). Once you have done this, you can change the checkbook item by entering C or change the

returned item by entering R. The C calls the CHANGES mode of the checkbook editor, and the R calls the CHANGES mode of the returned checks editor. Enter the checkbook line number if you are changing the checkbook item; enter the returned line number if you are changing the returned item. The item you are changing appears on the lower portion of the screen, along with the CHANGES menu. The item displayed on the lower part of the screen is updated to include the changes you make, but the screen display does not reflect changes made this way.

For deposits and charges, the reconciliation mode matches both item date and amount. It is possible to have more than one deposit or charge for the same amount on the same day, therefore, no deposits or charges are marked as having disagreements in amount. Instead, when a match is found for the date and not the amount, these returned items are treated as though they were not found on the checkbook and are considered to be returned but not on the checkbook.

THE FOLLOWING CHECKS ARE DUPLICATES

When more than one outstanding check on the checkbook has the same number as a returned check, they are treated as duplicates and are listed here. Only checks are listed because the check number is a unique identification. Two deposits or two charges for the same amount on the same day are possible, however, this may be an error. Therefore, these deposits and charges are listed with a warning message in the list of outstanding items.

All information about the duplicate checks is displayed:

THE FOLLOWING CHECKS ARE DUPLICATES

LINE	ITEM	DATE	PAYEE/DESCRIPTION	AMOUNT	BUDGET	TAX CAT
45	1126	9/??/81	CASH	$80.00	PERSONAL	
67	1126	9/15/81	CASH	$80.00	PERSONAL	
87	1192	10/1/80	JOHN SMITH, M.D.	$25.00	MEDICAL	MEDICAL
88	1192	10/1/80	VISA	$137.52	CHG CARD	

PRESS RETURN TO CONTINUE OR E TO EDIT

You may edit the checks. Before you delete a check, make sure it is a true duplicate and not just entered with the wrong check number.

THE FOLLOWING ITEMS ARE OUTSTANDING

     If there are any outstanding checks on the checkbook, they
are displayed 12 at a time. After every 12 the prompt:

          PRESS RETURN TO CONTINUE, E TO EDIT

appears. You may edit the checks at this time. Replying with an E
calls the CHECKBOOK EDITOR. As you edit, the checkbook balance is
displayed and updated at the top of the screen. When you have
finished editing you are returned to the same prompt, and a
return displays the next 12 outstanding checks.

     After all the outstanding checks are displayed, their total
is shown. This total does not reflect any changes you may have
made since the CANNOT RECONCILE BECAUSE message appeared.

     Next any outstanding bank charges are listed, followed by
any outstanding deposits. When there are two or more bank charges
or two or more deposits with the same date and dollar amount, a
warning message is displayed before the second and subsequent
charge or deposit.

THE FOLLOWING CHARGES ARE OUTSTANDING
LINE ITEM DATE   PAYEE/DESCRIPTION   AMOUNT BUDGET   TAX CAT
 157 CHAR 10/15/81 MORTGAGE $670.00 RENT/MTG INTEREST
THE FOLLOWING CHARGE MAY BE A DUPLICATE
 163 CHAR 10/1/81 SAFE DEPOSIT $35.50 MISC EXP MISC

PRESS RETURN TO CONTINUE OR E TO EDIT

     If any duplicate messages appear, fewer than 12 charges are
displayed at a time. The display is followed by the prompt

          PRESS RETURN TO CONTINUE, E TO EDIT

and you may edit the charges if you wish.

     If there are any outstanding deposits, they are displayed
last. The list is similar to that for outstanding charges,
including the duplicate message, if there are two or more
deposits with the same date and dollar amount. You may edit the
outstanding deposits at the end of each display.

If you have entered checkbook transactions for several months before reconciling your checkbook, you may have more items than can be listed in the RECONCILE mode. This mode can list up to 200 checks (100 for systems less than 54K), 50 charges and 50 deposits. The message:

```
                              {CHECKS   }
        There are MORE OUTSTANDING {CHARGES } than listed
                              {DEPOSITS}
```

is shown at the end of the list if there are more outstanding items. To list the rest of the outstanding items, when the CLEANUP MENU appears, save the returned items and exit from the RECONCILE mode. Then choose the SEARCH AND SUM mode (number 6 on the MAIN MENU) to locate the outstanding checks, deposits or charges. See Section 5.7 for details.

The list of OUTSTANDING ITEMS can be extremely useful. If items are identified as returned but not on the checkbook, the list of OUTSTANDING ITEMS shows whether the item has a wrong key field (check number, deposit date or charge date) or if it has not been entered at all. Further, if an item is outstanding for several months, you should take the trouble to determine why. It is possible that the outstanding item duplicates an item which had been returned before you entered the duplicate. You can quickly determine whether there is another such item on the checkbook by using the SEARCH AND SUM mode.

ITEMS RETURNED WITH STATEMENT

As an aid in making corrections, you always get lists of the checks, deposits and charges which were returned, and you may edit these items as they are displayed.

Checks are listed first. At the end of each group of 12 checks, you are prompted:

        PRESS RETURN TO CONTINUE, E TO EDIT OR X TO EXIT

A return lists the next group of returned checks, E calls the RETURNED ITEMS EDITOR (see Section 5.4.5 for details), and X takes you to the list of returned charges.

The returned charges are similarly listed, and they are followed by the returned deposits. Even thought there may be no returned items in a given category, you still have the opportunity to edit that category. This allows you to add missing items.

CLEANUP MENU

After all of the diagnostic messages and displays and any changes you may have made, the CLEANUP MENU gives you another chance to edit the checkbook and returned items. More importantly, it lets you try reconciling your checkbook again. If you wish to end the session, it also allows you to save the returned item and statement information on disk for future use, and return to the MAIN MENU.

```
                    CLEANUP MENU
              1. RETURNED ITEMS EDITOR
              2. CHECKBOOK EDITOR
              3. TRY RECONCILING AGAIN
              4. SAVE RETURNED ITEMS AND/OR EXIT
```

You may make any necessary changes using the RETURNED ITEMS EDITOR and the CHECKBOOK EDITOR. When any changes are completed, you may make another attempt at reconciliation, and the same error checking is performed as before. You may choose instead to save the returned item and statement information and leave the RECONCILIATION MODE completely. See Section 5.4.6 SAVING AND RESTARTING THE RECONCILIATION.

DUPLICATE CHARGES AND DEPOSITS

Charges on the same date for the same amount and deposits on the same date for the same amount may be duplicates or may not be. If none of the errors discussed above have been found, but possible duplicate charges or deposits have been found, the reconciliation process is interrupted, and you are given the opportunity to decide whether these are duplicates.

When this condition occurs, the appropriate messages are displayed:

There are CHARGES on the checkbook which may be DUPLICATES
There are DEPOSITS on the checkbook which may be DUPLICATES

THE FOLLOWING WILL BE LISTED TO AID IN CORRECTIONS

CHARGES still OUTSTANDING
DEPOSITS still OUTSTANDING

YOU MAY EDIT THE CHECKBOOK

These messages are followed by the appropriate lists of all outstanding items in that category. Duplicate items are preceded by:

THE FOLLOWING $\begin{Bmatrix} \text{CHARGE} \\ \text{DEPOSIT} \end{Bmatrix}$ MAY BE A DUPLICATE

as the outstanding items are listed. They may be edited as they are listed or you may choose not to edit until all items have been displayed. If you have not edited the outstanding items as they were displayed, you are asked:

DO YOU WANT TO EDIT THE CHECKBOOK? Y/N

If you answer no, the reconciliation process continues. If you answer yes, you may edit the checkbook, starting with the earliest outstanding item. If you used the editor, either while outstanding charges or deposits were listed, or by answering yes to the edit prompt, the SMART CHECKBOOK automatically starts the reconciliation scan from the beginning to make sure that no additional errors have crept in.

5.4.4 STATEMENT ITEM EDITOR

The statement statistics may be edited when you first enter the statistics, when there is a difference between the number of returned items you entered and the number in the statement statistics, and when the checkbook is out of balance.

When you first enter the statement statistics and indicate that you want to make a change, the STATEMENT CHANGES menu appears below the STATEMENT STATISTICS.


```
                    STATEMENT CHANGES
         1.  STATEMENT DATE
         2.  NUMBER OF CHECKS AND CHARGES (DEBITS) RETURNED
         3.  NUMBER OF DEPOSITS (CREDITS) RETURNED
         4.  ENDING BALANCE ON STATEMENT
        99.  EXIT
```


You may change any of the statement statistics. The menu is repeated until you respond 99.

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If there is a difference between the number of returned
items entered and the number in the statement statistics, the
statistics are listed, followed by the STATEMENT CHANGES menu. If
you have not yet tried to reconcile this statement, you may
change any of the statement statistics, otherwise you may change
all except the statement date.

If your checkbook is out of balance, you may choose to edit
the statement statistics. They are then listed, followed by the
STATEMENT CHANGES menu. You may change any item but the statement
date.

5.4.5 RETURNED ITEMS EDITOR

With the RETURNED ITEMS EDITOR you can correct the items
which have been returned with your bank statement. First the
RETURNED ITEMS EDITOR displays returned checks for you to
correct, then returned charges, followed by returned deposits.

The items are displayed in groups of 12. The RETURNED ITEMS
editor also shows the total of all the items in the category at
the top of the screen, which is updated whenever you add, delete
or change an amount. For checks and charges, you get both the
total of the category displayed and the total of checks and
charges. After each group you may press return to display the
next group of 12 items, you may enter E to edit any items in the
group, or you may enter X to exit from displaying the current
category of returned items, and go on to the next category.

CHECKS RETURNED WITH STATEMENT TOTAL [amount] CHECKS & CHARGES [amount]

LINE	NUMBER	AMOUNT
1	1276	$245.67
2	1278	$10.00
3	1279	$43.00
4	1280	$126.23
5	1281	$1.28
6	1283	$15.62
7	1285	$37.00
8	1290	$21.00
9	1291	$14.43
10	1293	$12.96
11	1275	$326.89
12	1294	$36.75

PRESS RETURN TO CONTINUE, E TO EDIT OR X TO EXIT

.

When checks are displayed and you enter E, you get the menu for correcting checks:

```
                    RETURNED CHECK CORRECTIONS
                       1. ADD A CHECK
                       2. DELETE A CHECK
                       3. CHANGE A CHECK
                      99. EXIT
```

You may make any corrections to the returned checks. After any editing, this menu is repeated, allowing more than one change.

1. ADD A CHECK

Enter a 1 to add a returned check. The following title is displayed:

ADDITIONS TO RETURNED CHECKS

You are then prompted:

NEW CHECK NUMBER

After you enter the check number, it is displayed on the lower portion of the screen. Then you are prompted:

AMOUNT:

After you enter the amount, the check number and amount are both displayed on the lower portion of the screen, and if there is room on the current display on the upper part of the screen, this addition appears at the end of the display, otherwise it is displayed after all the previously entered checks. The totals on the top of the screen are increased to include this new check.

2. DELETE A CHECK

Enter a 2 to delete a returned check. You then are asked for the line number of the check to be deleted.

LINE NUMBER:

The item to be deleted is displayed in the lower portion of the screen and you are asked to verify that the item should be deleted.

DELETE ITEM? Y/N

If you respond yes, the item is deleted, and erased from the screen display. The checks scroll up on the screen to replace the one deleted. At the same time, the line numbers greater than the one deleted are reduced by one. The totals on the top line are reduced by the amount of the deleted check.

3. CHANGE A CHECK

Enter a 3 to change a returned check. You are then asked for the line number of the item to be changed.

LINE NUMBER:

The check to be changed is displayed on the lower portion of the screen. Below it the CHANGES menu appears.

```
        RETURNED CHECK CHANGES
           1. CHECK NUMBER
           2. AMOUNT
          99. EXIT
```

Respond with a 1 to change the check number. A response of 2 lets you change the amount of the check. When you change a check, the changed check information appears on the lower part of the screen, and if you have changed the amount, the totals at the top of the screen are updated. When you enter 99, the display on the upper portion of the screen is refreshed to display the changes, and you return to the RETURNED CHECK CORRECTIONS menu.

After all returned checks are displayed and any editing performed, the returned charges are similarly displayed, followed by the returned deposits. For these items the CHECK NUMBER prompt is replaced by a prompt for the CHARGE DATE or DEPOSIT DATE.

5.4.6 SAVING AND RESTARTING THE RECONCILIATION SESSION

SAVING THE RECONCILIATION SESSION

The SMART CHECKBOOK lets you save both the returned items and the statement information that you have entered to permit returning to the reconciliation at a later time without the bother of reentering all that information. The SAVE RETURNED ITEMS AND/OR EXIT choice in a menu allows you to exit from the RECONCILIATION mode with or without saving on disk the information you have already entered. You are prompted:

DO YOU WANT TO SAVE THE RETURNED ITEMS FOR LATER USE? Y/N

Responding no returns you to the MAIN MENU. Responding yes results in a request for a name to call the file which will contain the returned item information.

NAME OF FILE OF RETURNED ITEMS

Respond with an unambiguous CP/M file name, such as B:FEB.81. This file cannot have the same name as the checkbook.

RESTARTING THE RECONCILIATION SESSION

If you answered no to the prompt:

HAVE YOU RECEIVED A NEW BANK STATEMENT? Y/N

you are prompted:

DO YOU WANT TO RESTART WITH PREVIOUSLY SAVED RETURNED ITEMS? Y/N

Respond no to return to the MAIN MENU. Respond yes to restart the reconciliation process with previously saved returned item and statement information. You are then asked for the name of the file with the reconciliation information.

NAME OF FILE OF RETURNED ITEMS

You must respond with the same file name which was used to save the information. The RESTART MENU appears:

```
              RESTART MENU
          1. ADD RETURNED ITEMS
          2. TRY RECONCILING
         99. RETURN TO MAIN MENU
```

Enter 1 if there are returned items to be added before
trying to reconcile the checkbook. Enter 2 to go directly to
reconciling the checkbook.

5.5 CURRENT BALANCE

The CURRENT BALANCE mode displays the current checkbook balance and then returns you to the MAIN MENU.

5.6 LIST OF OUTSTANDING ITEMS

When you select the LIST OF OUTSTANDING ITEMS, a list of all outstanding checks are displayed in groups of 20 at a time on the screen, followed by the total of all outstanding checks. This is followed by a list and total of outstanding charges. The total of all outstanding checks and charges is also displayed. Following the display of charges, a similar list and total of outstanding deposits is displayed. If you wish, the lists are printed on your printer.

If you had previously tried to reconcile your checkbook but exited from the RECONCILIATION mode before the checkbook balanced, those items which were returned at that time are considered to be still outstanding for the LIST OF OUTSTANDING ITEMS.

If you have more than 50 outstanding charges or deposits, the message

There are MORE OUTSTANDING $\begin{Bmatrix} \text{CHARGES} \\ \text{DEPOSITS} \end{Bmatrix}$ than listed

is shown at the end of the list. To list all outstanding items, choose CHECKBOOK SEARCH AND SUM (number 7 on the MAIN MENU).

5.7 SEARCH AND SUM

The SEARCH AND SUM mode brings the power of the computer to your checkbook. No longer do you have to leaf through old check registers to find if you have paid some bill. It automates the tedious task of looking through check registers and pulling out old checks to find your tax deductions, whether some check has been cancelled, how much you have paid to date on an installment plan, and how last year's expenses compare to this year's expenses.

You can easily search for any information about a checkbook entry, including all six categories of information you entered for the item, and also the statement date of a returned item, whether the item is outstanding, or if it has been deleted.

It is easy to get lists and totals of all checks written in January and February, 1980 or to VISA. It is equally easy to find all checks in January and February, 1980 written to VISA.

At tax time, you can quickly get itemized and totalled lists of your tax deductions in each of 16 tax categories.

You may also look for specific items and edit them, such as locating duplicate entries and deleting the duplicate.

You'll find the SEARCH AND SUM mode a valuable tool to maintain your tax, budget and financial records as well as your checkbook.

The CHECKBOOK SEARCH AND SUM menu lets you choose which combination of checks, charges and deposits you want searched.


```
        CHECKBOOK SEARCH AND SUM

        ITEMS TO BE SEARCHED
              1. CHECKS
              2. CHARGES
              3. DEPOSITS
              4. CHECKS AND CHARGES
              5. CHECKS AND DEPOSITS
              6. CHARGES AND DEPOSITS
              7. CHECKS, CHARGES AND DEPOSITS
             99. EXIT
```


Choose 99 to return to the MAIN MENU, otherwise your choice appears on the top of the screen, followed by the SELECTION CATEGORIES menu.

SELECTION CATEGORIES

        Choose the categories you want selected. If you do not want
to limit your search by choosing specific categories, enter 99.

        To erase any category selection, choose that category
number. The reminder:

        PRESS RETURN TO ERASE SELECTION

appears, followed by a prompt. Respond to the prompt with a
return, and any selection for the category is erased. You are
prompted for the next category number.

        If, for example, you want to find all your medical deduc-
tions for 1981, search checks and charges (number 4 on the ITEMS
TO BE SEARCHED menu), and when the SELECTION CATEGORIES menu
appears, specify a date range from 1/1/81 to 12/31/81 and a tax
deduction category of 1 (MEDICAL). As you set up your selection
criteria, they are displayed on the screen next to the menu.

                    SEARCHING CHECKS AND CHARGES
SELECTION CATEGORIES
  1. CHECK NUMBER
  2. DATE   1/1/81 TO 12/31/81
  3. PAYEE/DESCRIPTION
  4. AMOUNT
  5. BUDGET CATEGORY
  6. TAX DEDUCTION CATEGORY   MEDICAL
  7. STATEMENT DATE
  8. OUTSTANDING ITEMS
  9. DELETED ITEMS
 99. FINISHED SELECTING
CATEGORY NUMBER:

1. CHECK NUMBER

If the search includes checks, you may specify a range of check numbers or a single check number.

You are prompted

CHECK RANGE FROM:

After you enter a check number, you are prompted

TO:

Press return if you only want to match a single check number. If you want to select a range of check numbers, enter the highest check number you want included. Your selection appears at the right of the CHECK NUMBER line:

  1. CHECK NUMBER   [from check number] <TO [to check number]>

2. DATE

You may select a range of dates or a single date, all invalid dates or a specific invalid date.

The reminder

TYPE "INVALID DATES" FOR ALL INVALID DATES

appears below the SELECTION CATEGORIES menu, followed by the prompt

DATE RANGE FROM:

You may respond to the prompt with a return, the words INVALID DATES, or the earliest date to be included in the search.

If you respond to the FROM prompt with INVALID DATES, only items with invalid dates are selected, and INVALID DATES appears to the right of the DATE line. Valid dates are of the form mm/dd/yy, where mm is the month, dd the day and yy the last two digits of the year, which must also be between 75 and 99.

Enter an invalid date to the FROM prompt to select items where the date matches that invalid date exactly. The date appears to the right of the DATE line, and you are prompted for your next selection category.

If you enter a valid date, you are then prompted

TO:

for the latest date to be included in the selection. Responding
with a return to this prompt will limit the selection to the FROM
date, but the characters do not have to match exactly, as with an
invalid date; items whose dates are Ø4/Ø5/8Ø, 4/ 5/8Ø, and 4/5/8Ø
are all considered to have the same date.

After you enter the date, the date range appears at the
right of the date line.

    2. DATE   {[from date] <TO [to date]>}
                                     {INVALID DATES   }

3. PAYEE/DESCRIPTION

Select the payee/description feature to find items whose
payee/description includes the character string you specify. You
are prompted

    ENTER THE CHARACTER STRING TO BE MATCHED

If you respond with a return, you are asked whether you want to
find items which have no description, or whether you want to
erase your previous entry for this category:

PRESS RETURN TO ERASE SELECTION, S SELECTS ITEMS WITH NO DESCRIPTION

If you respond S, then the characters (NO DESCRIPTION) appear at
the right of the PAYEE/DESCRIPTION line. A return erases the
character string.

You do not have to enter the entire payee/description
string, but only as many characters as are needed to identify it
sufficiently. The character string you enter appears at the right
of the PAYEE/DESCRIPTION line.

    3. PAYEE/DESCRIPTION   {[character string]}
                                     {(NO DESCRIPTION)   }

4. AMOUNT

You may select items by amount, specifying either a single amount or a range of values.

You are prompted

AMOUNT RANGE FROM:

You may respond with a return or the lowest amount to be selected.

After you enter an amount, you are prompted

TO:

If you respond with a return, you limit the selection to one amount, otherwise enter the highest amount to be selected. The amount range appears at the right of the AMOUNT line, with the values in dollars and cents.

    4. AMOUNT   [from amount] <TO [to amount]>

5. BUDGET CATEGORY

When you are searching checks and/or charges, you may select any budget expense category. When you are searching deposits, you may select any budget revenue category.

The menu of budget categories which apply to your search is displayed. Enter the number of the budget category you want to select or a return to erase a previous budget selection. If you choose 99, items with no assigned budget category are selected, and NO BUDGET is displayed at the right of the BUDGET CATEGORY line, otherwise the budget category name appears there.

    5. BUDGET CATEGORY   {[budget category]}
                               {NO BUDGET   }

6. TAX DEDUCTION CATEGORY

In addition to the 16 specific tax deduction categories, you may select checks and charges with no tax deduction category or those with any tax deduction category.

The list of tax deductions, including NO DEDUCTIONS and ANY DEDUCTION is displayed. A return erases the tax deduction category you had previously selected, otherwise the tax deduction category you select is written at the right of the TAX DEDUCTION line.

    6. TAX DEDUCTION CATEGORY   [tax category]

7. STATEMENT DATE

The statement date of an item refers to the date of the bank statement when the item was returned. You may specify a range of statement dates or only a single statement date to be selected. By searching checks, charges and deposits and specifying the date of a bank statement, the SEARCH AND SUM mode can reproduce that bank statement.

You are prompted

STATEMENT DATE RANGE FROM:

You may respond with a return or the earliest date to be selected. After you enter a date, you are prompted

    TO:

Respond with a return if you want only a single statement date. If you want a range of dates, enter a second date. The statement date range appears at the right of the STATEMENT DATE line.

    7. STATEMENT DATE   [from date] <TO [to date]>

8. OUTSTANDING ITEMS

When you select OUTSTANDING ITEMS, the following prompt appears:

PRESS RETURN TO ERASE SELECTION, S SELECTS OUTSTANDING ITEMS

A return erases a previous selection of outstanding items; a response of S selects outstanding items, and the word YES appears at the right of the OUTSTANDING ITEMS line. NOTE: If you had previously tried to reconcile your checkbook but exited from the RECONCILIATION mode before the checkbook balanced, those items which were returned at that time are considered to be still outstanding by the SEARCH AND SUM mode.

```
8. OUTSTANDING ITEMS              YES
```

9. DELETED ITEMS

Items which you have deleted are not physically removed from the checkbook, but are flagged as deleted and are bypassed in processing. To find out which items have been deleted, the SEARCH AND SUM mode lets you look at these items.

You are prompted:

PRESS RETURN TO ERASE SELECTION, S SELECTS DELETED ITEMS

A return erases a previous selection of deleted items; a response of S selects deleted items, and YES appears at the right of the DELETED ITEMS line.

```
9. DELETED ITEMS                  YES
```

99. END OF SELECTION

When you have finished setting up your selection criteria, enter 99 to the CATEGORY NUMBER prompt. This takes you to the REPORT MENU.

REPORT

A reminder of the information you are asking for is displayed at the top of the screen followed by the REPORT MENU:

REPORT MENU
1. LIST ITEMS ONLY
2. SUM ITEMS ONLY
3. LIST AND SUM ITEMS
99. CANCEL REQUEST

Reports always appear on the screen. To get a printed copy, answer yes to the prompt:

DO YOU WANT THESE ITEMS LISTED ON THE PRINTER? Y/N

You are then prompted:

TURN ON PRINTER. PRESS RETURN WHEN READY
OR PRESS ESCAPE TO PRINT WITHOUT PAUSING

Press escape to obtain a continuous list without pauses to edit. If you choose one of the list options (report 1 or 3), you have the opportunity to edit after each group of 12 items is found and at the end of the search when the prompt

PRESS RETURN TO CONTINUE, E TO EDIT OR X TO EXIT

appears. Press return to continue the search; enter X to exit from the search or E to edit. When E is selected, the current balance in your checkbook appears at the top of the screen, and is updated whenever you change an item. Any changes you make to the listed items are displayed on the screen, but not on the printer listing.

1. LIST ITEMS ONLY

This choice gives you a list of each item which meets all the selection criteria you have specified. The list includes the line number, item identification (check number, DEP or CHAR), date, payee/description, amount, budget and tax deduction category. You may edit these items. At the end of the list there is a count of the number of items found.

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2. SUM ITEMS ONLY

This choice calculates the total amounts of the items which meet all the selection criteria. You get a count of the number of items found, and if any are found, you also get the totals. If you are searching both debits (checks and/or charges) and credits (deposits), separate totals are calculated.

3. LIST AND SUM ITEMS

This option gives the lists and amount totals described above, but if you choose to edit the items, the totals are not calculated, even if no items are changed, and the reminder:

TOTALS ARE NOT COMPUTED WHEN THE EDITOR IS USED

is displayed.

99. CANCEL REQUEST

If you do not want the search, you may cancel it and return to the CHECKBOOK SEARCH AND SUM menu.

5.8 MONTHLY INCOME AND EXPENSE TABLES

The TABLE mode produces tables of monthly income and expenses for as many as 12 months at a time. These tables are viewed on your CRT and may also be printed. TABLE lets you create tables for the 16 predefined tax categories, your budget categories, and by categories you specify, which use the PAYEE/DESCRIPTION field. Once you specify these categories, they may be saved and used over again to produce tables periodically.

When you enter the TABLE mode, the TABLE MENU is displayed:

```
               TABLE MENU
           1. TAX CATEGORIES
           2. BUDGET CATEGORIES
           3. CHOOSE YOUR OWN PAYEE/DESCRIPTION CATEGORIES
           4. PREVIOUSLY SAVED PAYEE/DESCRIPTION CATEGORIES
          99. EXIT
```

1. TAX CATEGORIES

This produces a table of the monthly expenses which you have assigned to any of the sixteen predefined TAX CATEGORIES.

2. BUDGET CATEGORIES

This produces a table of monthly revenues and expenses for the BUDGET CATEGORIES you chose when starting your checkbook. You are asked:

DO YOU WANT THE TABLE TO EXCLUDE ITEMS WITHOUT A BUDGET CODE? Y/N

Answer yes if you want the table only to include items with assigned BUDGET CATEGORIES. Otherwise deposits not assigned a budget code appear as "OTHER RV" and checks and charges not assigned a budget code appear as "OTHER EX".

3. CHOOSE YOUR OWN PAYEE/DESCRIPTION CATEGORIES

You specify up to 30 categories (25 categories for systems less than 54K) of up to 30 characters long to be matched to the PAYEE/DESCRIPTION field of deposits or checks and charges. Only the first 10 characters of each category are displayed on the table, but all the characters you specify are used for the search. The entire PAYEE/DESCRIPTION is searched, and the characters can be anywhere in the field to be matched. You can create categories to examine income or expenses periodically. These categories may be saved and reused.

The following is displayed at the top of the screen:

```
        ENTER CATEGORIES
LINE    CATEGORY
```

You are then prompted:

```
        CATEGORY
```

The CATEGORY prompt expects one of three responses:

```
A category
CONTROL A (^A)
RETURN
```

A CATEGORY

A category is a group of up to 30 characters or numbers which are matched with the PAYEE/DESCRIPTION field of deposits or checks and charges to accumulate monthly totals for the table.

CONTROL A

Responding to the CATEGORY prompt with a CONTROL A lets you change the category you have just entered.

RETURN

Responding to the CATEGORY prompt with a RETURN takes you out of the CATEGORY input mode and you are prompted:

```
        PRESS RETURN TO CONTINUE OR E TO EDIT
```

Respond E to review and edit the categories. See TABLE CATEGORY EDITOR below. A return takes you directly to PRINTING AND SAVING CATEGORIES described below.

4. PREVIOUSLY SAVED PAYEE/DESCRIPTION CATEGORIES

This feature lets you create a table with categories you have already specified. You may also change, delete or add to the categories before the table is run, as well as save the changes on disk.

You are asked the name of the category file. This file must have a different name from the checkbook file:

ENTER NAME OF FILE OF TABLE CATEGORIES

The restart menu is then displayed:

TABLE RESTART MENU
1. LIST AND EDIT CATEGORIES
2. COMPUTE TABLE
99. EXIT

Choose 1 for the TABLE CATEGORY EDITOR, which allows adding, deleting or changing categories. After editing, you may save the edited categories and/or compute the table.

If you choose 2, see the description of the table creation process, below.

Replying with a 99 returns you to the TABLE MENU.

TABLE CATEGORY EDITOR

The categories are printed on the screen in groups of 12. After each group you are prompted:

PRESS RETURN TO CONTINUE, E TO EDIT OR X TO EXIT

An X exits from the editor, a RETURN displays the next 12 categories, and an E calls up the edit menu:

TABLE CATEGORY EDITOR
1. ADD A CATEGORY
2. DELETE A CATEGORY
3. CHANGE A CATEGORY
99. EXIT

1. ADD A CATEGORY

This selection lets you add categories of up to 30 characters long to the end of the list. You are prompted:

ADDITIONS TO CATEGORIES
NEW CATEGORY:

If there is room on the current screen display the new category is added to the end of the list, otherwise it will appear at the end of the last screen display.

2. DELETE A CATEGORY

This selection deletes an entry. You are prompted:

LINE NUMBER:

respond with the line number of the category to be deleted.

After you enter the line number, the category is displayed on the lower portion of the screen and you are asked:

DELETE ITEM? Y/N

Answer yes to delete the category and reduce the line number by one for each category with a line number greater than the one deleted. The screen display is also refreshed. You then return to the edit menu. Answer no to return directly to the edit menu.

3. CHANGE A CATEGORY

This selection allows changing any category already entered. You are prompted:

LINE NUMBER:

and then:

NEW CATEGORY:

The new category replaces the previous one and you return to the edit menu.

99. EXIT

Enter 99 to exit from the menu.

PRINTING AND SAVING CATEGORIES

If you have entered your own categories, or if you have edited categories which were previously saved, you are asked:

DO YOU WANT THESE ITEMS LISTED ON THE PRINTER? Y/N

A yes response prints the items. A no response takes you directly to the prompt:

DO YOU WANT TO SAVE THE CATEGORIES FOR LATER USE? Y/N

If you want to save the categories, you are asked for a name for the file. This cannot be the same name as the checkbook file, and should not be the same name as an existing file unless you do not want that file kept.

TABLE CREATION

TAX CATEGORY TABLE

The table of tax categories includes monthly expenses in each of the sixteen tax categories. You specify the beginning and ending dates of the table.

BUDGET CATEGORY TABLE

Both income (revenue) and expenses appear in the budget category table for the time period you specify. The revenues appear first, followed by their total, then expenses, followed by total expenses. The difference between total revenues and total expenses is the bottom line of the table, called "NET CHANGE".

If you have not assigned a budget code to a revenue item, it appears on the line called "OTHER RV". Similarly, expenses not assigned a budget code appear on the line called "OTHER EX". This accounts for all revenues and expenses on the checkbook. However, you may not want non-budget items in the table. The BUDGET CATEGORY TABLE is flexible, and you have the option to exclude both lines from the budget table. This feature is particularly useful if you have defined you budget categories to correspond to Schedule C items. The BUDGET CATEGORY TABLE may then be used to generate the portion of the Schedule C which has come through your checkbook, excluding all the non-Schedule C items in your checkbook.

CHOOSE YOUR OWN CATEGORY TABLE

The categories you choose may be used to create either a monthly income or expense table, using the INCOME/EXPENSE MENU. You also specify the beginning and ending dates of the table.


```
        INCOME/EXPENSE MENU
    1. MONTHLY EXPENSES
    2. MONTHLY INCOME
   99. EXIT
```


If you do not want to compute the table at this time, choose 99 to return to the TABLE MENU.

SPECIFYING THE TIME PERIOD

You specify the time period covered by the table, which may be as long as 12 months and which does not have to be in a single calendar year.

You are asked for the beginning and ending dates of the table:

ENTER BEGINNING MONTH AND YEAR(MM/YY):

Enter the number of the month, a slash, and the last two digits of the year. TABLE displays the month and year:

BEGINNING DATE IS [month, 19yy]

followed by the prompt:

ENTER ENDING MONTH AND YEAR(MM/YY)

The ending date is displayed:

ENDING DATE IS [month, 19yy]

You have an opportunity to change the dates before the table is computed:

DO YOU WANT TO REENTER THE DATES? Y/N

A yes response starts the date prompting over. A no response begins the table computations, and "..... WORKING ....." is displayed while the computations are made.

If you request more than one table in a given session, the beginning and ending dates of the previous table are displayed. You may either compute the subsequent table with these dates or reenter the dates. (This feature does not apply to systems less than 54K.)

TABLE DISPLAY

    The portion of the table displayed on your CRT will have at
most 5 months across the screen and 18 categories down the
screen, plus the totals for all months and all categories. If you
have specified more than 5 months, the remaining months may be
seen by using the right arrow on your keyboard in response to the
prompt:

        CURSOR UP, DOWN, LEFT, RIGHT OR PRESS RETURN TO EXIT

to move the table forward one month at a time. The table can be
shifted back toward the starting position by pressing the left
arrow. If you have specified more than 18 table categories, you
may scroll the table up and down using the up and down arrows.
The cursor movement keys do not have any effect if there is no
more of the table to be displayed in that direction.

    If you are using the Morrow Designs MDT 2Ø, MDT 5Ø or MDT 6Ø
terminal, use the following instead of your cursor keys:

            CONTROL E (^E) to move up
            CONTROL X (^X) to move down
            CONTROL S (^S) to move left
            CONTROL D (^D) to move right

    If your CRT does not have cursor keys, use CONTROL H (^H)
for left, CONTROL J (^J) for up, CONTROL L (^L) for down, and
CONTROL K (^K) for right.

    For CRT's which need long delays after cursor addressing,
the table displays a maximum of 4 months at a time.

    A sample table screen display of five months of a longer
table is:

CATEGORY	JANUARY	FEBRUARY	MARCH	APRIL	MAY	TOTAL
GAS.......	1Ø4.47	1Ø6.89	133.29	81.95	51.19	783.79
ELECTRIC..	52.5Ø	45.Ø1	44.43	39.39	41.ØØ	746.Ø7
PHONE.....	36.83	79.Ø3	32.68	37.35	31.97	54Ø.13
WATER.....	.	46.85	.	.	45.45	223.67
TOTAL.....	193.8Ø	277.78	21Ø.4Ø	158.69	169.61	2293.66

CURSOR UP, DOWN, LEFT, RIGHT OR PRESS RETURN TO EXIT

To leave the table press return. After exiting from the table you are asked if you want to print the table on your printer. If you reply yes, the table is printed. The format of the printed table depends upon the width of your printer. A sample 12 month table on a 132 column wide printer follows. Notice that the total for the months appears after the last month.

MONTHLY EXPENSES FOR CHEKBOOK.81
JANUARY, 1981 TO DECEMBER, 1981

CATEGORY	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE
GAS.......	104.47	106.89	133.29	81.95	51.19	45.62
ELECTRIC..	52.50	45.01	44.43	39.39	41.00	75.73
PHONE.....	36.83	79.03	32.68	37.35	31.97	47.92
WATER.....	.	46.85	.	.	45.45	.
TOTAL.....	193.80	277.78	210.40	158.69	169.61	169.27

MONTHLY EXPENSES FOR CHEKBOOK.81
JANUARY, 1981 TO DECEMBER, 1981

CATEGORY	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	TOTAL
GAS.......	27.18	28.85	25.09	39.64	53.84	85.78	783.79
ELECTRIC..	108.12	156.98	60.32	41.30	39.11	42.18	746.07
PHONE.....	52.30	66.69	32.96	37.43	39.11	45.86	540.13
WATER.....	.	62.25	.	.	69.12	.	223.67
TOTAL.....	187.60	314.77	118.37	118.37	201.18	173.82	2293.66

SECTION 6: USING THE SMART CHECKBOOK WITH CREDIT CARD ACCOUNTS

You may use the features of the SMART CHECKBOOK to manage your credit card accounts. The basic procedure for setting up and maintaining a credit card book is the same as that of a checkbook. This section describes how credit card account books correspond to checkbooks.

STARTING A CREDIT CARD ACCOUNT BOOK

Keep each credit card account as a separate account book. You may select different budget categories for each credit card account. For example, you may want different budget categories for a personal account than for a business account.

The beginning balance of a new account is zero. The beginning balance of an existing account is the new balance appearing on your credit card statement after you are in agreement with the credit card company as to how much you owe (the equivalent of a checkbook in balance). If you owe money, the balance entered is a negative number. If the company owes you money, the balance entered is a positive number.

When setting up the account book, use the ENTER ITEMS mode to enter your credit card transactions for which you have not yet been billed on a credit card statement. As you enter the transactions, the SMART CHECKBOOK updates the balance in your account.

1. ENTER ITEMS

You enter credit card transactions just as you do checkbook items. Your responses to each prompt are described here.

Check #, DEPosit or CHARge

Credit card purchases are entered as CHARGES, as are finance charges, credit card fees and cash advances. Payments to your credit card account, credits for returned purchases and other credits are entered as DEPOSITS.

DATE

The date and the amount are used to match the transactions on your credit card account book with the transactions on your credit card account statement.

The date you make a purchase or receive a credit is the date to enter. You usually will have a receipt for the purchase or credit with the date on it.

The date of a cash advance is the date it was issued.

The date of a finance charge or credit card fee is the date of the credit card account statement where it appears.

For payments, leave the date blank, and enter the date you make the payment as part of the PAYEE/DESCRIPTION. The date your payment is received by the credit card company will usually be different from the date you make the payment. When you receive your credit card statement, change the blank date to the date the payment was received. You still have the record of the actual date you made the payment as part of the PAYEE/DESCRIPTION. If there is a long time between your payment date and the date the payment is received, you should bring this to the attention of the credit card company, especially if you have to pay finance charges as a result.

PAYEE/DESCRIPTION

Use the PAYEE/DESCRIPTION to identify the seller and/or the type of transaction.

AMOUNT, BUDGET CATEGORY, TAX CATEGORY

The amount, budget and tax categories are entered just as you would enter them for a checkbook item.

2. RECONCILE

You may use the RECONCILE mode to keep track of your credit card transactions in the same way you use it to balance your checkbook. Your credit card statement is similar to your bank statement. Credit card statements usually itemize your purchases, payments, credits to your account, cash advances (where applicable), finance charges, credit card fees, previous balance and new balance. The number of items in each category and their total value may also appear on the statement. Use this information to enter the statement statistics and the returned items.

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Whenever you receive a new statement, use the SEARCH AND SUM mode to find payments with blank dates and change the blank dates of the payments to the dates shown on the credit card statement. Be sure to enter any finance charges and credit card fees in your account book, using the ENTER ITEMS mode, before reconciling.

ENTERING STATEMENT STATISTICS

The STATEMENT DATE is the billing date of your credit card statement.

The NUMBER OF CHECKS AND CHARGES (DEBITS) RETURNED is the total number of purchases, cash advances, finance charges, and credit card fees.

The NUMBER OF DEPOSITS (CREDITS) RETURNED is the total number of payments and credits to your account.

The ENDING BALANCE ON STATEMENT is your new balance. If you owe money, enter the balance as a negative number. If the company owes you money, enter the balance as a positive number.

ENTERING RETURNED ITEMS

There are no returned checks for credit card accounts, only charges and deposits. Using the credit card statement, and any receipts returned with it, when you are asked for returned charges, enter the transaction date and amount for each purchase, cash advance, finance charge, and fee. When you are asked for returned deposits, enter the transaction date and amount for each payment and credit. If two dates are shown for an item, enter the transaction date and not the date it was posted to your account.

RECONCILE PROCEDURE

Follow the same procedure for reconciling your credit card account as you do for a bank account. The first time you try to reconcile your credit card account with a new statement, if you did not change the blank date of a payment to the date that payment was received by the credit card company, you will not be able to reconcile. The date the credit card company received the payment and the amount of the payment, which you entered as a returned deposit, appear after the message THE FOLLOWING RETURNED DEPOSITS ARE NOT ON THE CHECKBOOK. The payment with the blank date on your account book is displayed after the message THE FOLLOWING DEPOSITS ARE OUTSTANDING. At this point, respond E to the edit prompt and change the blank date to the date of the payment as it appears on the statement. After correcting any errors you may have made, reconcile again.

3. EDITOR

You may use the CHECKBOOK EDITOR to edit your credit card accounts.

4. CURRENT BALANCE

Your current balance should be negative or zero. A negative balance shows the amount you owe on your credit card, including items for which you have not yet been billed and payments and credits not yet credited to your account. DO NOT pay this amount. You PAY the amount specified on your credit card statement.

A positive current balance shows how much money the credit card company owes you.

5. OUTSTANDING ITEMS

The list of outstanding deposits includes payments you have made to your account and credits you have received which have not yet appeared on a credit card statement. Similarly, the list of outstanding charges includes purchases and cash advances which have not yet appeared on a credit card statement. You are not likely to find finance charges and credit card fees listed in outstanding charges, because you are customarily billed for them on a credit card statement.

6. SEARCH AND SUM

You can use all the features of the SEARCH AND SUM mode, but since there are no checks in credit card accounts, search deposits and/or charges only.

7. MONTHLY TABLES

All the features of the MONTHLY TABLES can be used.

SECTION 7: CREATING A NEW CHECKBOOK FROM AN OLD ONE

At the end of a year it is a good idea to start a new checkbook and save the old checkbook in a safe place. The SMART CHECKBOOK makes this very easy to do. You do not have to enter any checkbook items or other information. All you have to do is run the program NEWBOOK which comes with the SMART CHECKBOOK. The new checkbook is automatically created with all the information needed. NEWBOOK should be run after all items for the old year have been entered. This allows you to obtain complete tax and budget summaries for the year.

When you run NEWBOOK, it will create a new checkbook containing all outstanding items on the checkbook. You also can include all returned items written after a date you specify.

The only information that NEWBOOK needs is the name (and drive) of the old checkbook, the name (and drive) of the new checkbook, and the optional date.

To create a new checkbook, enter:

<drive:>NEWBOOK

you are then prompted:

INSERT DISK CONTAINING OLD CHECKBOOK AND DISK FOR NEW CHECKBOOK
PRESS RETURN WHEN READY

At this point, if you have a multiple drive system, remove both the system diskette and the diskette containing the NEWBOOK program and insert the diskette containing your checkbook and a diskette which will have the new checkbook written on it.

(If you have a single drive system, the new checkbook will be written on the same diskette as the old checkbook. When the new checkbook has been successfully created, use a utility program to copy the old checkbook to another diskette and erase it from the diskette containing the new checkbook.)

When you press return, you are prompted for the name of the old checkbook.

ENTER NAME OF OLD CHECKBOOK:

You are then asked for the name of the new checkbook.

ENTER NAME OF NEW CHECKBOOK:

Your current checkbook balance and budget categories are also copied to the new checkbook.

If you had tried to reconcile your checkbook but exited from the RECONCILIATION mode before the checkbook balanced, those items which were returned at that time are considered to be still outstanding by NEWBOOK.

While the new checkbook is being created, the message:

.....COPYING.....

appears on the screen. When the new checkbook is complete, the following message is displayed:

[new checkbook] HAS BEEN SUCCESSFULLY CREATED

After this message, or if you had pressed return to leave the program, you are reminded:

MAKE SURE SYSTEM DISK IS IN DRIVE A. PRESS RETURN WHEN READY

SECTION 8: INSTALLING THE SMART CHECKBOOK ON YOUR COMPUTER

The first time you run the SMART CHECKBOOK you have to tell it what CRT terminal you are using, and also some information about your printer, if you have one.

The SMART CHECKBOOK knows the control codes of many popular CRT's, and if your CRT is among these, all you have to do is to find its name and model on the CRT menu and enter the corresponding number.

For terminals not on the menu, there is a special procedure, which asks you for your CRT command codes, one feature at a time. It prompts you every step of the way, and tests the codes you enter for each feature, letting you make sure that they are right before proceeding to the next feature.

After you enter your CRT information, you are asked for some facts about your printer. The SMART CHECKBOOK then saves the CRT and printer information in a file called TERMINAL.DRV. This file is saved on the currently logged in drive.

As long as you use the same CRT terminal and printer, you won't have to concern yourself with this procedure again.

8.1 CRT TERMINAL MENU

The SMART CHECKBOOK looks for a file called TERMINAL.DRV on the currently logged drive, if none is specified. If the file is not there, you get the CRT terminal menu.

WHICH CRT TERMINAL ARE YOU USING?

1. MORROW DESIGNS MDT 20
2. MORROW DESIGNS MDT 50
3. MORROW DESIGNS MDT 60
4. BEEHIVE DM SERIES
5. DEC VT52
6. HAZELTINE 1420/1500 SERIES
7. LEAR-SIEGLER ADM-3A

8. LEAR-SIEGLER ADM-31
9. SOROC IQ-120
10. SOROC IQ-135/IQ-140
11. TELEVIDEO 910
12. TELEVIDEO 912B/912C/920B/920C
13. TELEVIDEO 950
14. NONE OF THE ABOVE

99. EXIT FROM PROGRAM

NUMBER?

For terminals not on the menu, enter 14. When you enter the number of your CRT, you are asked

YOU HAVE SELECTED [crt name and model]
DO YOU WANT TO CHANGE THIS? Y/N

If you answer yes, make another choice from the menu. If you respond no, the features of your CRT which the SMART CHECKBOOK uses are listed, and you are asked:

DO YOU WANT TO CHANGE THIS? Y/N

Verify that your CRT has all the features listed, and answer no if it does. Otherwise, answer yes to repeat the CRT menu. If you have selected 14, NONE OF THE ABOVE, the features are not displayed.

If your terminal is not on the menu or does not have all the features listed, see Section 8.3 for details on how to enter and test your CRT command codes.

8.2 PRINTER INFORMATION

The SMART CHECKBOOK needs just three items of information about your printer: the number of lines to print on a page, whether a form feed will start a new page, and the number of characters it can print on a line.

You are first asked for the number of lines.

PRESS RETURN FOR 60 LINES ON A PRINTER PAGE
OR ENTER THE NUMBER OF LINES ON A PRINTER PAGE IF NOT 60
(NUMBER MUST BE BETWEEN 10 AND 100)

NUMBER?

You then verify the number entered:

NUMBER OF LINES IS [number]. DO YOU WANT TO CHANGE THIS? Y/N

Answer yes to reenter the information.
You are next asked for form feed information:

PRESS RETURN IF YOUR PRINTER USES CONTROL L FOR FORM FEEDS
OR ENTER THE ASCII DECIMAL NUMBER IF NOT CONTROL L (ASCII DECIMAL 12)
IF YOUR PRINTER DOES NOT USE FORM FEEDS ENTER 0

NUMBER?

Those printers which can skip to a new page (form feed) generally use Control L to do so. The ASCII decimal number equivalent of Control L is 12. If your terminal uses this code, press carriage return. If your terminal does not have the ability to form feed, enter 0. If your terminal uses some other code to form feed, enter the ASCII decimal number equivalent of the code. See Appendix B for the ASCII code equivalents.

You then verify the number you entered:

FORM FEED IS [number]. DO YOU WANT TO CHANGE THIS? Y/N

Answer yes to reenter the information.

You are next prompted for the number of characters that can be printed on a line:

PRESS RETURN IF YOUR PRINTER PRINTS 132 CHARACTERS PER LINE
OR ENTER THE NUMBER OF CHARACTERS IF NOT 132
(NUMBER MUST BE BETWEEN 80 AND 132)

NUMBER?

Press carriage return for 132 characters; enter the number if other than 132 characters. Eighty characters is the minimum width printer which may be used with the SMART CHECKBOOK. If you enter a number less than 80, the SMART CHECKBOOK sets the printer width to 80, and you get the message:

MINIMUM PRINTER WIDTH IS 80 CHARACTERS

The maximum printer width is 132 characters. If you enter a number greater than 132, the SMART CHECKBOOK sets the printer width to 132 and you get the message

MAXIMUM PRINTER WIDTH IS 132 CHARACTERS

You verify the printer width:

CHARACTERS PER LINE IS [number]. DO YOU WANT TO CHANGE THIS? Y/N

Answer yes to reenter the information.

If you do not have a printer, press carriage return to each of the 3 prompts, and answer no to the three questions.

When you have finished describing your printer, the SMART CHECKBOOK creates a file called TERMINAL.DRV on the disk you specified, which contains the CRT and printer information. The next time you use the SMART CHECKBOOK, it will look on the drive you specify for the TERMINAL.DRV file to get the CRT and printer information. If you should want to change your CRT or printer information for any reason, exit from the SMART CHECKBOOK and use the CP/M ERA command to erase TERMINAL.DRV before running the SMART CHECKBOOK again.

8.3 CRT TERMINALS NOT ON THE MENU

If your CRT terminal is not on the menu, you will have to determine the command codes your CRT uses for the features used by the SMART CHECKBOOK. These features include:

```
Required -      Cursor addressing
At least one {Clear screen
   required    {Clear from cursor to end of screen
Optional -      Home cursor
Optional -      Line insert/line delete
Optional -      Cursor up, down, left, right
```

You will need your CRT manual to find the codes, the methods used for cursor addressing and line insert, and if a delay is needed after executing any of your CRT's features used by the SMART CHECKBOOK.

It will be helpful to fill out Form 8-1, CURSOR ADDRESSING METHODS AND COMMAND CODES and Form 8-2, CRT FUNCTIONS, using your CRT terminal manual, before you run the SMART CHECKBOOK. The rest of this section explains these commands.

8.3.1 DELAYS AFTER EXECUTING COMMANDS

Your CRT manual should tell you if your CRT requires a delay after executing a command. Most terminals do not need nulls for the commands used by the SMART CHECKBOOK. Usually the delay is expressed in milliseconds, but it also may be expressed in terms of nulls. At 9600 baud one null is approximately 1 millisecond. At 4800 baud one null is approximately 2 milliseconds. For smoothest video display, use the highest baud rate possible for your CRT and computer.

The following table gives the maximum number of nulls (delay) that the SMART CHECKBOOK allows for each command. If your CRT requires more nulls (a longer delay) than shown in the table for a particular command, then you cannot use that command. Enter the number of nulls in Forms 8-1 and 8-2.

TABLE 8-1

COMMAND	MAXIMUM NUMBER OF NULLS
Cursor addressing	
one command for line and column	30 minus C
separate commands for line and column	15 minus C
Clear screen	79 minus C
Clear from cursor to end of screen	79 minus C
Home cursor	10 minus C
Line insert	39 minus C
Line delete	49 minus C

C is the number of characters in the command code

8.3.2 CURSOR ADDRESSING

There are two kinds of cursor addressing, direct (absolute) cursor addressing, which is the most common, and relative addressing. If your CRT uses only relative addressing, read RELATIVE CURSOR ADDRESSING, below, before continuing with this section.

There are different ways that CRT's handle direct addressing. The most common procedure is a command followed by a line reference and a column reference. The command may be called "load cursor" or "set cursor address" or "lead-in characters" or "load address" or "cursor addressing" or some similar name. These all mean the same thing; they are the characters to send which will tell the CRT that the information which follows these characters positions the cursor.

For most CRT's the line reference is sent before the column reference; for others, the column is sent before the line. Some CRT's require a separator between the line and the column positions and/or a terminator after the cursor addressing command. A few CRT's use two commands, one to position the line and another to position the column.

Using your CRT manual, determine which method your CRT uses for cursor addressing. The following list summarizes the five possible methods. Check the appropriate method in Form 8-1, and enter the appropriate codes for that method in the spaces provided.

1. Load cursor   line position   column position
2. Load cursor   column position   line position
3. Load cursor   line position separator column position terminator
4. Load cursor   column position separator line position terminator
5. Move cursor to line (or column)   line (or column) position

    The next information you need to know is how your CRT determines the line and column positions. Most often CRT's use a single character (byte) to indicate the line or column position. Frequently the space character, which is the same as the ASCII decimal number 32 and hexadecimal number 2Ø, is used to position the cursor at the topmost line or the leftmost column (line 1 or column 1). Some CRT's which use a single character use Ø (zero) to position at line 1 or column 1, and some use different numbers for the line and column positions.

    Another form of line and column positioning which is used by some CRT's is to send a two or three digit number string, such as "ØØ1", to position the cursor. Some CRT's which use the number string method also require a separator between the line and the column positions. These CRT's may accept a number string one, two or three digits long. If you have such a CRT, when you are prompted for the number which positions the cursor at line 1 (or column 1), respond with the maximum size string accepted, that is, a two or three digit string.

    Using your CRT manual, determine which of these two methods your CRT uses for line and column positions. Check the appropriate method in Form 8-1 and enter the values for line 1 and column 1 positioning in the space provided.

    A. A single character (byte) such as space character
    B. A number string such as ØØ1

CURSOR ADDRESSING INFORMATION

You are prompted for the cursor addressing method:

IS YOUR CURSOR ADDRESS COMMAND OF THIS FORM
LOAD CURSOR   LINE POSITION   COLUMN POSITION
? Y/N

A no response will give you another form

LOAD CURSOR   COLUMN POSITION   LINE POSITION
? Y/N

LOADCURSOR   LINEPOSITION   SEPARATOR   COLUMNPOSITION   TERMINATOR
? Y/N

LOAD CURSOR   COLUMN POSITION   SEPARATOR   LINE POSITION   TERMINATOR
? Y/N

MOVE CURSOR TO LINE (OR COLUMN)   LINE (OR COLUMN) POSITION
? Y/N

Respond yes to the method used by your terminal, which must be
one of the five possible forms. If you respond no to all forms
you are asked if you want the questions repeated. A yes response
repeats the questions; a no response exits from the SMART
CHECKBOOK.

        After you have chosen the method for cursor addressing, you
are prompted for the method of line and column positioning:

ARE CURSOR LINE OR COLUMN POSITIONS GIVEN IN A SINGLE CHARACTER (BYTE)
EXAMPLE: SPACE CHARACTER (WHICH EQUALS 32 ASCII DECIMAL OR 20 HEX)
? Y/N

If you respond no, you are asked

ARE CURSOR LINE OR COLUMN POSTIONS GIVEN IN A NUMBER STRING
EXAMPLE: 001
? Y/N

Respond yes to the method used by your CRT, which must be one of
the two possible forms. If you respond no to both forms, you are
asked if you want the questions repeated. A yes response repeats
the questions; a no response exits from the SMART CHECKBOOK.

ENTERING THE CURSOR ADDRESSING CODES

You are prompted for the necessary codes and line and column positioning, depending upon the cursor addressing method. Form 8-2 shows which codes are needed for each method. If your terminal uses a control sequence, respond with the ASCII decimal equivalent for the control sequence (control A through control Z which is ASCII decimal 1 through 26). If your terminal uses numbers, respond with the ASCII decimal equivalent (numbers 0 through 9 are ASCII decimal 48 through 56). If your terminal uses any other characters, respond with either the character or its ASCII decimal equivalent. For example, you may enter either the escape key or ASCII decimal 27 for the escape character.

You are asked for the first, second, third, etc., character of the code. You enter one character (or its ASCII decimal equivalent) at a time. After you have entered all the characters, respond with a return to the prompt. For example, if the load cursor command is Escape =, then your responses would be as follows:

PROMPT	YOUR RESPONSE
ENTER 1ST LOAD CURSOR CHARACTER	Escape key<CR> or 27<CR>
ENTER 2ND LOAD CURSOR CHARACTER	=<CR> or 61<CR>
ENTER 3RD LOAD CURSOR CHARACTER	<CR>

After you have entered all the characters, their ASCII decimal equivalents are displayed for you to verify. Appendix A lists all 128 ASCII characters and their decimal equivalents. If you have entered the wrong information, respond yes to the prompt:

DO YOU WANT TO CHANGE THIS? Y/N

and you will be able to reenter the information.

For line or column positioning information, enter the number or character which positions the cursor at line 1 (or column 1), that is, the topmost line (or leftmost column). If your CRT uses a single character (byte), you may enter that character or the ASCII decimal equivalent. The ASCII decimal equivalent is displayed for you to verify. If your CRT uses a number string, enter that string, such as 001. That string is displayed for you to verify.

When each cursor code and line and column positioning has been entered, you are asked:

DOES YOUR CRT NEED NULLS AFTER CURSOR ADDRESSING? Y/N

If your CRT needs nulls, answer yes and you are asked for the number of nulls. The number you enter is displayed:

NUMBER OF NULLS IS [number]
DO YOU WANT TO CHANGE THIS? Y/N

If you entered the wrong number, answer yes to reenter.

Now the SMART CHECKBOOK tests the whole cursor addressing command. First, line numbers 1 to 24 are displayed, and you are asked if they appear down the leftmost side of the screen

ARE LINE NUMBERS 1 TO 24 DOWN THE
LEFTMOST SIDE OF THE SCREEN? Y/N

If the line numbers do not appear down the left side of the screen, or the prompt is not worded exactly as shown above, respond no. If numbers appear across the top of the screen, then your line and column positioning need to be reversed. If the number 1 does not appear on the first line, 2 on the second line, etc., then you probably have the wrong value for the character which positions the cursor at line 1. You may also have chosen the wrong method for line and column positioning. If the question does not appear exactly as shown above, then you may need a delay after cursor addressing. For other problems, check the method you selected for cursor addressing, line and column positioning, and the codes you entered.

If the line numbers and prompt are displayed properly, respond yes to the question. Then the numbers 1234567890 should be repeated 8 times across the top of the screen. If they are not, check the possible sources of error described above, particularly the column positioning and delay, and respond no to the prompt:

IS "1234567890" REPEATED 8 TIMES
ACROSS THE TOP OF THE SCREEN? Y/N

If you respond yes, you are asked

DOES THIS MESSAGE START ON LINE 16, COLUMN 4? Y/N

There should be one blank space between the number 16 on the left hand side of the screen and the start of this message. If the start of the message is missing, then you need a delay after cursor addressing. If the end of the message does not appear on line 16, and you have specified a delay after cursor addressing, then the delay is too long for the baud rate at which your CRT is set. Before you change the baud rate of your CRT and computer, make sure you have specified the correct number on nulls.

RELATIVE CURSOR ADDRESSING

Skip this section if your CRT has direct addressing.

In relative cursor addressing the cursor is moved relative to its current screen location. In order for a CRT with relative addressing to work with the SMART CHECKBOOK, the first part of the cursor addressing command must be a command to home the cursor. Follow this with the cursor addressing command. If the CRT uses separate commands to position line and column, the home cursor command comes before the line position command only. Follow the rest of the procedure used for direct cursor addressing.

8.3.3   CLEAR SCREEN

After the cursor addressing command has been tested and okayed, you are asked

DOES YOUR CRT HAVE A COMMAND TO CLEAR ENTIRE SCREEN? Y/N

If your CRT can clear the entire screen with one command, then answer yes. If you respond no, then you are asked

DOES YOUR CRT HAVE A COMMAND TO CLEAR FROM CURSOR TO END OF SCREEN? Y/N

If your CRT has such a command, answer yes and see Section 8.3.5, CLEAR FROM CURSOR TO END OF SCREEN. If you respond no, you are reminded that the program requires a clear screen command, and you are asked if you want the questions repeated. Answer yes to repeat the questions, no to exit from the SMART CHECKBOOK.

ENTERING AND TESTING THE CLEAR SCREEN COMMAND

You are prompted to enter the first, second, etc., clear screen command and number of nulls. As described in CURSOR ADDRESSING, remember to respond with the ASCII decimal equivalent for control sequences (control A through control Z) and numbers (Ø through 9), or either the character or its ASCII decimal equivalent for any other code. After you have verified the codes and any delay, the clear screen command is tested, and the message

WAS SCREEN CLEARED? Y/N

should be displayed. If the screen was not cleared, you entered the wrong command, and a no response repeats the questions DOES YOUR CRT HAVE A COMMAND TO CLEAR etc. If the screen was cleared, but the beginning of the message is lost, then you need a delay (or a longer delay) after the clear screen command. Respond no to the message.

If the screen was cleared, respond yes. The next test checks whether the clear screen command also homes the cursor. There should be a 1 displayed in line 1, column 1 of the screen, and on line 2 the message:

IS THERE A 1 IN LINE 1 COLUMN 1? Y/N

If the 1 is present, but not in line 1, column 1, then either your CRT does not home the cursor after clearing the screen, or, if you entered a delay for the clear screen command, it may be too long. If the 1 is not present, then you probably need a delay (or a longer delay) after the clear screen command. If you answer no to the message, you are asked for the home command.

8.3.4 HOME COMMAND

If your CRT does not have a home command, respond with a return to the prompt for the first home character, and the SMART CHECKBOOK will automatically use the cursor addressing command to position the cursor at home. After you verify the commands for homing the cursor, you are asked if there is a 1 in line 1, column 1. If there is no 1 in that location, answer no if you think that you have entered the home command incorrectly, and you may then reenter the home command. If there is a 1 in that location, or if you think that the problem may be due to the need for delays in the clear screen command, answer yes, and another test is performed. The following message should appear:

```
TESTING HOME AND CLEAR TOGETHER
IS "TESTING HOME AND CLEAR TOGETHER" DISPLAYED ON LINE 1? Y/N
```

If everything appears exactly as shown, then respond yes. You will then be prompted for the next feature. If part of the message is missing or in the wrong location, then answer no. If you had entered a home command, you get the message

```
THERE MAY BE A PROBLEM WITH YOUR CLEAR SCREEN COMMAND
PRESS RETURN TO CONTINUE
```

and when you press return, you get the chance to reenter the clear screen command.

```
If you had not entered a home command, you get the message
```

```
THERE MAY BE A PROBLEM WITH YOU CURSOR ADDRESSING COMMAND
OR YOUR CLEAR SCREEN COMMAND
STARTING OVER
PRESS RETURN TO CONTINUE
```

and when you press return, you restart with entering the cursor addressing command.

8.3.5 CLEAR FROM CURSOR TO END OF SCREEN

You are prompted to enter the first, second, etc. clear to end of screen character and any delay. As described in CURSOR ADDRESSING, remember to respond with the ASCII decimal equivalent for control sequences (control A through control Z) and numbers (Ø through 9), or either the character or its ASCII decimal equivalent for any other code. If your CRT does not have a clear from cursor to end of screen command, enter a return to the first prompt and after you verify that there is no clear to end of screen command, you are prompted for the next feature. After you have verified the codes and any delay, the command is tested:

```
IS THE CURSOR UNDER THIS * AND IS THE SCREEN CLEAR
FROM THE CURSOR ONWARD? Y/N ▪
```

If you have entered the command correctly, the cursor will be under the *. If it is not, respond no to reenter the command. If your CRT has clear from cursor to end of screen as the only clear screen command, you are then asked for the home command. See Section 8.3.4, HOME COMMAND, for the procedure to enter and test the home command with the clear to end of screen command.

The following test is performed if your CRT has both clear screen and clear from cursor to end of screen. To make sure that you have entered the correct delay, if any, the next test of the clear to end of screen command displays

TESTING DELAY
IS "TESTING DELAY" DISPLAYED ON LINE 1? Y/N

If the beginning of the message is missing, then you need to enter a delay (or a longer delay). If the message is all there, but not exactly as shown, then the delay is too long. A no response to the TESTING DELAY question lets you reenter the codes and delay for the clear from cursor to end of screen command. A yes response prompts you for the next function, line insert.

8.3.6 LINE INSERT

You are prompted to enter the first, second, etc. line insert character and any delay. If your CRT does not have the line insert function, respond with a return to the first prompt, and after you verify that there is no line insert function, you will be prompted for the cursor movement keys (see Section 8.3.8). If your CRT does not have line insert and line delete functions, the SMART CHECKBOOK uses another method to perform these functions.

After you enter and verify your CRT's line insert command, the following information is displayed:

THIS IS LINE 1 THIS IS LINE 1 THIS IS LINE 1 THIS IS LINE 1
THIS IS LINE 2 THIS IS LINE 2 THIS IS LINE 2 THIS IS LINE 2
THIS IS LINE 3 THIS IS LINE 3 THIS IS LINE 3 THIS IS LINE 3

There is a slight delay after these lines appear, and then the message

IS THIS BETWEEN LINES 1 AND 2? Y/N

should be inserted between lines 1 and 2 so that the screen display now reads:

THIS IS LINE 1 THIS IS LINE 1 THIS IS LINE 1 THIS IS LINE 1
IS THIS BETWEEN LINES 1 AND 2? Y/N ▮
THIS IS LINE 2 THIS IS LINE 2 THIS IS LINE 2 THIS IS LINE 2
THIS IS LINE 3 THIS IS LINE 3 THIS IS LINE 3 THIS IS LINE 3

If the message is between lines 2 and 3, the you need to precede the line insert command with a cursor up command. If the beginning of the message is missing, then you need a delay (or a longer delay). If the message is partially between lines 1 and 2 and overlaps part of line 2, then the delay is too long. If there is some other problem with the screen display, then check your codes for line insert.

Respond no to the question to reenter the codes and delay for line insert. A yes response prompts you for the line delete function.

8.3.7 LINE DELETE

You are prompted for the first, second, etc. line delete characters and any delay. If your CRT does not have the line delete function, respond with a return to the first prompt, and after you verify that there is no line delete function, you are prompted for the cursor movement functions (see Section 8.3.8). If your CRT does not have a line delete function, the SMART CHECKBOOK uses an alternate method to perform line insert and line delete functions.

After you enter and verify the line delete command, the following is displayed:

THIS IS LINE 1 THIS IS LINE 1 THIS IS LINE 1 THIS IS LINE 1
THIS IS LINE 2 THIS IS LINE 2 THIS IS LINE 2 THIS IS LINE 2
THIS IS LINE 3 THIS IS LINE 3 THIS IS LINE 3 THIS IS LINE 3

After a slight delay, line 2 should be deleted, and the new screen display should look like this:

THIS IS LINE 1 THIS IS LINE 1 THIS IS LINE 1 THIS IS LINE 1
THIS IS LINE 3 THIS IS LINE 3 THIS IS LINE 3 THIS IS LINE 3

DID LINE 3 REPLACE LINE 2 AND REST OF SCREEN REMAIN UNCHANGED? Y/N █

If the beginning of the question is missing, then you need a delay (or a longer delay). If line 2 is deleted and the beginning of the question is missing, then the delay is too long. For other problems with the screen display, check the codes for line delete. Respond no to the question if there are any problems in order to reenter the codes and delay. If there are no problems, then answer yes, and you are prompted for the cursor movement keys.

8.3.8 CURSOR MOVEMENT KEYS

If your cursor has keys to move the cursor up, down, left and right, answer yes to the prompt

DOES YOUR CRT HAVE KEYS FOR CURSOR UP, DOWN, LEFT AND RIGHT? Y/N

If you answer no, you are told to

USE CONTROL H FOR CURSOR LEFT
USE CONTROL J FOR CURSOR DOWN
USE CONTROL K FOR CURSOR UP
USE CONTROL L FOR CURSOR RIGHT

If you enter yes to the prompt, you are reminded that

IF YOUR CURSOR KEYS USE CONTROL SEQUENCES, ENTER THE ASCII DECIMAL EQUIVALENT
FOR EXAMPLE, ENTER 1 FOR CONTROL A, 2 FOR CONTROL B, 26 FOR CONTROL Z

If your CRT uses some other method, such as escape sequences (a series of characters beginning with the escape character), you may press the cursor arrow key followed by a carriage return when you are prompted to

$$\text{ENTER THE CURSOR} \begin{Bmatrix} \text{UP} \\ \text{DOWN} \\ \text{LEFT} \\ \text{RIGHT} \end{Bmatrix} \text{CHARACTER}$$

After you enter each key, the ASCII decimal equivalent of the information you entered is displayed for you to verify. When you have entered the four cursor movement keys, the SMART CHECKBOOK makes sure that there are four different codes. If any two are the same, you are told which they are, and you then reenter the cursor movement keys.

FORM 8-1

CURSOR ADDRESSING METHODS AND COMMAND CODES

ADDRESSING METHOD (SELECT ONE)	POSITIONING METHOD (SELECT A OR B)	LOAD CURSOR COMMAND CODE	POSITION CURSOR AT LINE 1	SEPARATOR CODE	POSITION CURSOR AT COLUMN 1	TERMINATOR CODE	NUMBER OF NULLS
[]load cursor, line, column	A single byte / B number string			not used		not used	
[]load cursor, column,line	A single byte / B number string			not used		not used	
[]load cursor, line, separator, column, terminator	A single byte / B number string						
[]load cursor, column, separator, line, terminator	A single byte / B number string						
[]move cursor to line (or column)	A single byte / B number string	MOVE TO LINE COMMAND CODE		MOVE TO COLUMN COMMAND CODE		not used	

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FORM 8-2
CRT FUNCTIONS

COMMAND	CONTROL CODE	NUMBER OF NULLS
clear screen		
clear from cursor to end of screen		
home cursor		
line insert		
line delete		
cursor up		not used
cursor down		not used
cursor left		not used
cursor right		not used

APPENDIX A

ERROR MESSAGES

        Error messages are listed alphabetically by prompt. For
example, if you receive an error message when you enter something
in response to a prompt for amount, the message and its
explanation will be found in ERROR MESSAGES FOR AMOUNT.

ERROR MESSAGES FOR CHECK NUMBER

Message:
CANNOT SPECIFY [check number] FOR CHECK NUMBER - REENTER CHECK NUMBER
Response:
Enter a check number which does not begin with DEP or CHAR or
press return.

Message:
CHECK NUMBER CANNOT BE ALL BLANK - REENTER CHECK NUMBER
Response:
Enter a non-blank check number. If you are in the ENTER ITEMS
mode, you may press Control A (^A) to change the last entry you
made or press return to leave the ENTER ITEMS mode.

Message:
CHECK NUMBER CANNOT BE ALL BLANK - REENTER Check #, DEPosit or CHARge:
Response:
Enter a non-blank check number, the word DEPOSIT or the word
CHARGE. If you are in the ENTER ITEMS mode, you may press
Control A (^A) to change the last entry you made or press return
to leave the ENTER ITEMS mode.

Message:
CHECK NUMBER CANNOT BE ALL BLANK
REENTER {BEGINNING}{ENDING } CHECK NUMBER OR PRESS RETURN FOR {CHECKWRITER MENU}{BEGINNING NUMBER}
Response:
Enter a non-blank check number or press return. If you entered
the beginning check number, pressing return repeats the
CHECKWRITER MENU. If you entered the ending check number,
pressing return limits the selection to the beginning number.

Message:
ENDING CHECK NUMBER IS LESS THAN BEGINNING CHECK NUMBER
REENTER ENDING CHECK NUMBER OR PRESS RETURN FOR BEGINNING NUMBER
Response:
Enter a number higher than the beginning check number, or press
return to limit the selection to the beginning check number.

Message:
ONLY [number] RETURNED CHECKS PERMITTED
PRESS RETURN TO CONTINUE
Response:
You are trying to enter more returned checks than the maximum
number permitted for your system size. You may have up to 100
returned checks for a system smaller than 54K, up to 200 checks
for a larger system. When you press return you are prompted for
returned deposits.

Message:
REMINDER: YOU ARE NOT SEARCHING CHECKS
PRESS RETURN TO CONTINUE
Response:
This reminder is displayed when you are searching charges and/or
deposits. Press return, and then select another category.

Message:
[check number] CANNOT BE A RETURNED CHECK NUMBER - REENTER CHECK NUMBER
Response:
Returned check numbers must be all numeric. Enter a numeric check
number. If you are in the ENTER ITEMS mode, you may press
Control A (^A) to change the last entry you made or press return
to leave the ENTER ITEMS mode.

Message:
[check number] HAS MORE THAN 4 CHARACTERS - REENTER CHECK NUMBER
Response:
Enter a check number with 4 or fewer characters. If you are in
the ENTER ITEMS mode, you may press Control A (^A) to change the
last entry you made or press return to leave the ENTER ITEMS
mode.

Message:
[check] HAS MORE THAN 4 CHARACTERS - REENTER Check #, DEPosit or CHARge:
Response:
The first five characters you entered are displayed in the
message. Enter a check number with 4 or fewer characters, the
word DEPOSIT or the word CHARGE. If you are in the ENTER ITEMS
mode, you may press Control A (^A) to change the last entry you
made or press return to leave the ENTER ITEMS mode.

Message:
[check number] HAS MORE THAN 4 CHARACTERS
REENTER {BEGINNING} CHECK NUMBER OR PRESS RETURN FOR {CHECKWRITER MENU}
        {ENDING   }   {BEGINNING NUMBER}
Response:
Enter a check number with 4 or fewer digits or press return. If
you entered the beginning check number, pressing return repeats
the CHECKWRITER MENU. If you entered the ending check number,
pressing return limits the selection to the beginning number.

Message:
[check number] HAS MORE THAN 4 CHARACTERS - REENTER {FROM}{TO }
Response:
Enter a check number with 4 or fewer characters or press return.

Message:
[check number] IS NOT A CHECK NUMBER
REENTER {BEGINNING}{ENDING } CHECK NUMBER OR PRESS RETURN FOR {CHECKWRITER MENU}{BEGINNING NUMBER}
Response:
You entered a value which is not a number. Enter a check number
with 4 or fewer digits or press return. If you entered the
beginning check number, pressing return repeats the CHECKWRITER
MENU. If you entered the ending check number, pressing return
limits the selection to the beginning number.

Message:
["to" check] LESS THAN FROM CHECK (["from" check]) - REENTER TO
Response:
Enter a check number higher than the FROM check number or press
return.

ERROR MESSAGES FOR DATES

Message:
CANNOT SELECT BOTH STATEMENT DATE AND {OUTSTANDING ITEMS}{DELETED ITEMS   }
PRESS RETURN TO CONTINUE
Response:
Press return. You may then select another category. Statement
date, outstanding items and deleted items are mutually exclusive.
If an item has been returned it cannot be outstanding, nor may it
be deleted. If you want to select statement dates, you must first
erase the selection you had made of outstanding or deleted items.

Message:
DATE HAS MORE THAN 8 CHARACTERS - REENTER FROM
Response:
Enter a date (valid or invalid) with no more than 8 characters,
the words INVALID DATES, or press return.

Message:
DATE HAS MORE THAN 8 CHARACTERS - SUGGESTED FORM IS MM/DD/YY
REENTER DATE:
Response:
Enter a date with 8 or fewer characters.

Message:
ENDING DATE IS EARLIER THAN BEGINNING DATE-REENTER ENDING DATE:
Response:
The ending date you entered for the table is earlier than the date you specified to start the table. Enter a date later than the beginning date.

Message:
ONLY 5Ø RETURNED {DEPOSITS / CHARGES} PERMITTED

PRESS RETURN TO CONTINUE
Response:
You are trying to enter more returned deposits or charges than the limit. Press return to continue processing.

Message:
STATEMENT DATE CANNOT BE CHANGED AT THIS TIME
PRESS RETURN TO CONTINUE
Response:
The statement date cannot be changed after you attempt to reconcile and the "..... WORKING ....." message has been displayed. Press return and then make another choice from the STATEMENT CHANGES menu.

Message:
TABLE MAY HAVE NO MORE THAN 12 MONTHS-REENTER ENDING DATE:
Response:
You entered a time period longer than 12 months. Enter a date no later than 11 months after the beginning date.

Message:
[to date] EARLIER THAN FROM DATE ([from date]) - REENTER TO
Response:
Enter a date later than the FROM date or press return.

Message:
[to date] EARLIER THAN FROM STATEMENT DATE([from date]) - REENTER TO
Response:
Enter a date later than the first date or press return.

Message:
[date] IS NOT A VALID DATE. DO YOU WANT TO CHANGE THE DATE? Y/N
Response:
The date you entered is not of the form mm/dd/yy, it is not between 1/1/75 and 12/31/99, or you entered an erroneous month, day or year. Enter yes to repeat the date prompt, enter no to keep the date you entered.

Message:
[date] IS NOT A VALID DATE
IF DATE IS NOT CHANGED, ONLY ITEMS WHERE DATE="[date]" ARE SELECTED
DO YOU WANT TO CHANGE THE DATE? Y/N
Response:
Enter yes to change the date, no to keep the invalid date.

Message:
[date] IS NOT A VALID DATE - REENTER:
Response:
The date you entered is not of the form mm/dd/yy, it is not
between 1/1/75 and 12/31/99, or you entered an erroneous month,
day or year. This entry must be a valid date. Reenter the date or
press return.

Message:
[date] IS NOT A VALID DATE
REENTER DATE
Response:
The date you entered is not of the form mm/dd/yy, it is not
between 1/1/75 and 12/31/99, or you entered an erroneous month,
day or year. This entry must be a valid date. Reenter the date.

Message:
[date] IS NOT A VALID DATE - REENTER $\begin{Bmatrix} \text{DEPOSIT} \\ \text{CHARGE} \end{Bmatrix}$ DATE
Response:
The date you entered is not of the form mm/dd/yy, it is not
between 1/1/75 and 12/31/99, or you entered an erroneous month,
day or year. This entry must be a valid date. Reenter the date.
If you are in the ENTER ITEMS mode, you may press Control A (^A)
to change the last entry you made or press return to leave the
ENTER ITEMS mode.

Message:
[month] IS NOT A VALID MONTH - REENTER DATE
Response:
The number you entered for the month is not between 1 and 12, or
the date you entered is not of the form mm/yy. Reenter the date.

Message:
[year] IS NOT A VALID YEAR - REENTER DATE
Response:
The year you entered is not between 75 and 99, or the date you
entered is not of the form mm/yy. Reenter the date.

ERROR MESSAGES FOR PAYEE/DESCRIPTION

Message:
PAYEE/DESCRIPTION TRUNCATED TO LEFTMOST 30 CHARACTERS
PAYEE/DESCRIPTION NOW READS [30 characters   ]
DO YOU WANT TO CHANGE PAYEE/DESCRIPTION? Y/N
Response:
Enter yes to repeat the PAYEE/DESCRIPTION prompt. Enter no to
keep the truncated description.

Message:
[character string] HAS MORE THAN 30 CHARACTERS - REENTER
Response:
Enter 30 or fewer characters or press return.'

ERROR MESSAGES FOR AMOUNT

Message:
[amount] HAS MORE THAN 2 DECIMAL PLACES - REENTER AMOUNT:
Response:
Enter an amount with two or fewer decimal places.

Message:
[amount] HAS MORE THAN 2 DECIMAL PLACES - REENTER $\begin{Bmatrix} FROM \\ TO \end{Bmatrix}$
Response:
Enter an amount with no more than 2 decimal places or press
return.

Message:
[amount] IS GREATER THAN $999,999.99 - REENTER AMOUNT:
Response:
The largest amount you may enter is $999,999.99. Enter an amount
less than one million dollars.

Message:
[amount] IS GREATER THAN $999,999.99 - REENTER $\begin{Bmatrix} FROM \\ TO \end{Bmatrix}$
Response:
Enter an amount less than $1,000,000 or press return.

Message:
[amount] IS NEGATIVE - REENTER AMOUNT:
Response:
The amount you enter for a check, deposit or charge cannot be
negative. Enter a non-negative number.

Message:
[amount] IS NEGATIVE - REENTER $\begin{Bmatrix} FROM \\ TO \end{Bmatrix}$
Response:
Enter a positive amount or press return.

Message:
[to amount] LESS THAN FROM AMOUNT ([from amount]) - REENTER TO
Response:
Enter an amount greater than the FROM amount or press return.

ERROR MESSAGES FOR BUDGET

Message:
  [budget category] IS NOT $\begin{Bmatrix} \text{AN EXPENSE} \\ \text{A REVENUE} \end{Bmatrix}$
Response:
You entered a budget category number for an expense for a deposit
or revenue number for a check or charge. Press return and the
appropriate budget menu will be displayed. You may then select
another budget category number.

ERROR MESSAGES FOR TAX

Message:
DEPOSITS ARE NOT TAX DEDUCTIBLE PRESS RETURN TO CONTINUE
Response:
A tax deduction category may not be entered for a deposit. Press
return and make another selection from the menu.

ERROR MESSAGES FOR OUTSTANDING ITEMS

Message:
CANNOT SELECT BOTH OUTSTANDING ITEMS AND $\begin{Bmatrix} \text{STATEMENT DATE} \\ \text{DELETED ITEMS} \end{Bmatrix}$
PRESS RETURN TO CONTINUE
Response:
Press return. You may then select another category. Statement
date, outstanding and deleted items are mutually exclusive cate-
gories. To be outstanding an item cannot have been returned or
deleted. If you want to select outstanding items but have also
selected either statement date or deleted items, you must erase
that selection before you can select outstanding items.

ERROR MESSAGES FOR DELETED ITEMS

Message:
CANNOT SELECT BOTH DELETED ITEMS AND $\begin{Bmatrix} \text{OUTSTANDING ITEMS} \\ \text{STATEMENT DATE} \end{Bmatrix}$
PRESS RETURN TO CONTINUE
Response:
Press return. You may then select another category. Statement
date, outstanding items and deleted items are mutually exclusive.
If you want deleted items but have selected either statement date
or outstanding items, you must erase that selection before you
can select deleted items.

ERROR MESSAGES FOR CATEGORY

Message:
CATEGORY TRUNCATED TO LEFTMOST $\begin{Bmatrix} 8 \\ 30 \end{Bmatrix}$ CHARACTERS

CATEGORY NOW READS $\begin{Bmatrix} [\ 8\ characters] \\ [30\ characters] \end{Bmatrix}$

DO YOU WANT TO CHANGE THE CATEGORY? Y/N
Response:
You entered a category longer than the maximum. For budget
categories the maximum is 8 characters; for table categories the
maximum is 30 characters. Enter yes to repeat the category
prompt; enter no to keep the truncated category.

Message:
ONLY [number] CATEGORIES ARE PERMITTED
PRESS RETURN TO CONTINUE
Response:
You are trying to add a category to a full list. An existing
category must be deleted before a new category can be added.
Press return.

ERROR MESSAGES FOR LINE NUMBER

Message:
ENDING LINE NUMBER IS LESS THAN BEGINNING LINE NUMBER
REENTER ENDING LINE NUMBER OR PRESS RETURN FOR BEGINNING NUMBER
(NUMBER MUST BE BETWEEN [beginning number] AND [last checkbook entry]
Response:
Enter a number higher than the beginning line number, or press
return to limit the selection to the beginning line number.

Message:

LINE NUMBER [line number] $\begin{Bmatrix} \text{DOES NOT HAVE A VALID DATE} \\ \text{HAS AN AMOUNT OF ZERO} \\ \text{HAS NO PAYEE} \end{Bmatrix}$
REENTER LINE NUMBER OR PRESS RETURN FOR NO SELECTION
Response:
You cannot select this check for writing. Enter the line number
of another check or press return to exit without selecting.

Message:
LINE NUMBER [line number] $\begin{Bmatrix} \text{IS NOT A CHECK} \\ \text{IS NOT OUTSTANDING} \end{Bmatrix}$
REENTER LINE NUMBER OR PRESS RETURN FOR NO SELECTION

Response:
You entered the line number of an item not on the list of
outstanding checks. Enter a line number on the list or press
return to exit without selecting.

Message:
[line number] HAS ALREADY BEEN DELETED AND MAY NOT BE CHANGED
PRESS RETURN TO CONTINUE
Response:
You entered the line number of a deleted checkbook item. Press
return to repeat the edit menu.

Message:
[line number] IS NOT IN RANGE OF LINE NUMBERS - REENTER
Response:
You entered a line number which is not on the list. Reenter a
line number.

Message:

[line number] IS NOT IN RANGE OF LINE NUMBERS

REENTER {BEGINNING} LINE NUMBER OR PRESS RETURN FOR {CHECKWRITER MENU}
       {ENDING   }   {BEGINNING NUMBER}

(NUMBER MUST BE BETWEEN [beginning number] AND [last checkbook entry]

Response:
Enter a line number within the limits shown or press return. If
you entered the beginning line number, pressing return repeats
the CHECKWRITER MENU. If you entered the ending line number,
pressing return limits the selection to the beginning number.

ERROR MESSAGES FOR CHANGE OR DELETE

Message:

THERE IS NO ITEM TO {CHANGE}
                    {DELETE}

PRESS RETURN TO CONTINUE

Response:
There are no items on the list. Press return to repeat the
prompt.

Message:
[checkbook item]
WARNING: THIS ITEM WAS RETURNED WITH STATEMENT DATED [date]
PRESS RETURN TO CONTINUE
Response:
You entered the line number of a returned item. You may edit a
returned item, but make sure that this is the item you want to
change. Press return and the CHANGES menu is displayed.

ERROR MESSAGES FOR FILES

Message:
{TABLE CATEGORY }
{RETURNED ITEMS} FILE CANNOT HAVE THE SAME NAME AS THE CHECKBOOK FILE
- REENTER NAME OF FILE OF {TABLE CATEGORIES}
                          {RETURNED ITEMS }
Response:
Files used to save information to be used with a checkbook file
cannot have the same name as the checkbook file. If you are
saving the information, use a different name. If you want the
file which already has the saved information, the name it was
saved under has to be different from the checkbook name. Reenter
the file name.

Message:
[new checkbook] ALREADY EXISTS ON SPECIFIED DRIVE
REENTER NEW CHECKBOOK NAME OR PRESS RETURN TO LEAVE PROGRAM
Response:
There is already a file with this name on the drive specified in
the file name. Enter a name for the new checkbook file or press
return if you want to leave the program now.

Message:
[file] ALREADY EXISTS - TO USE THIS FILE ENTER 'SCRATCH'
ELSE ENTER NEW NAME:
Response:
You want to save information on a file which is already there. If
you want to replace the existing file with this information,
enter SCRATCH. If you want to keep the existing file, enter a
different file name.

Message:
[file] DOES NOT EXIST
ENTER NEW NAME OR PRESS RETURN FOR MAIN MENU:
Response:
You entered a name of a returned items file which does not exist.
Enter another file name, or press return to get the MAIN MENU.

Message:
[file] DOES NOT EXIST
ENTER NEW NAME OR PRESS RETURN FOR TABLE MENU
Response:
You entered a name of a table categories file which does not
exist. Enter another file name, or press return to get the TABLE
MENU.

Message:
[old checkbook] NOT FOUND ON SPECIFIED DRIVE
REENTER OLD CHECKBOOK NAME OR PRESS RETURN TO LEAVE PROGRAM
Response:
You entered a name for the old checkbook which does not exist on
the drive specified in the checkbook name. Enter the old
checkbook name with the drive reference, or press return if you
want to leave the program now.

Message:
THERE ARE NO CATEGORIES ON [file]
PRESS RETURN TO CONTINUE
Response:
You have chosen a file of saved table categories, but there are
no categories on the file. Press return, and the TABLE MENU is
repeated.

Message:
UNEXPECTED END OF DATA SEE APPENDIX A OF THE MANUAL FOR MORE DETAILS
Response:
Under normal operation you will not see the error message
UNEXPECTED END OF DATA. The message is displayed when the disk is
full or when the SMART CHECKBOOK's pointers indicate that there
should be more records on the file than were found. If the disk
isn't full, the error may be caused by changing the checkbook
using a program other than the SMART CHECKBOOK or by hardware
failure.

Whenever this error occurs, the program is stopped. If this error
occurs while you are in the reconcile mode, you have the
opportunity to save the returned items before the program stops.
To recover from this error, reconstruct the checkbook from your
most recent backup copy. See RECONSTRUCTING YOUR CHECKBOOK in
Section 5.3.3(b) for details.

ERROR MESSAGES FOR FORMS

Message:
CANNOT WRITE CHECKS BECAUSE NO CHECK FORM SELECTED
RETURNING TO MAIN MENU
Response:
If you want to write checks, you need to choose a check form.

ASCII DECIMAL-HEXADECIMAL-CHARACTER EQUIVALENTS

DECIMAL	HEXADECIMAL	CHARACTER	CONTROL SEQUENCE
Ø	ØØ	null	CONTROL @
1	Ø1		CONTROL A
2	Ø2		CONTROL B
3	Ø3		CONTROL C
4	Ø4		CONTROL D
5	Ø5		CONTROL E
6	Ø6		CONTROL F
7	Ø7	bell	CONTROL G
8	Ø8	backspace	CONTROL H
9	Ø9	tab	CONTROL I
1Ø	ØA	line feed	CONTROL J
11	ØB		CONTROL K
12	ØC	form feed	CONTROL L
13	ØD	return	CONTROL M
14	ØE		CONTROL N
15	ØF		CONTROL O
16	1Ø		CONTROL P
17	11		CONTROL Q
18	12		CONTROL R
19	13		CONTROL S
2Ø	14		CONTROL T
21	15		CONTROL U
22	16		CONTROL V
23	17		CONTROL W
24	18		CONTROL X
25	19		CONTROL Y
26	1A		CONTROL Z
27	1B	escape	CONTROL [
28	1C		CONTROL \
29	1D		CONTROL]
3Ø	1E		CONTROL ^
31	1F		CONTROL –

ASCII DECIMAL-HEXADECIMAL-CHARACTER EQUIVALENTS

DECIMAL	HEXADECIMAL	CHARACTER	DECIMAL	HEXADECIMAL	CHARACTER
32	20	space	80	50	P
33	21	!	81	51	Q
34	22	"	82	52	R
35	23	#	83	53	S
36	24	$	84	54	T
37	25	%	85	55	U
38	26	&	86	56	V
39	27	'	87	57	W
40	28	(	88	58	X
41	29	)	89	59	Y
42	2A	*	90	5A	Z
43	2B	+	91	5B	[
44	2C	,	92	5C	\
45	2D	-	93	5D	]
46	2E	.	94	5E	^
47	2F	/	95	5F	_
48	30	Ø	96	60	`
49	31	1	97	61	a
50	32	2	98	62	b
51	33	3	99	63	c
52	34	4	100	64	d
53	35	5	101	65	e
54	36	6	102	66	f
55	37	7	103	67	g
56	38	8	104	68	h
57	39	9	105	69	i
58	3A	:	106	6A	j
59	3B	;	107	6B	k
60	3C	<	108	6C	l
61	3D	=	109	6D	m
62	3E	>	110	6E	n
63	3F	?	111	6F	o
64	40	@	112	70	p
65	41	A	113	71	q
66	42	B	114	72	r
67	43	C	115	73	s
68	44	D	116	74	t
69	45	E	117	75	u
70	46	F	118	76	v
71	47	G	119	77	w
72	48	H	120	78	x
73	49	I	121	79	y
74	4A	J	122	7A	z
75	4B	K	123	7B	{
76	4C	L	124	7C	|
77	4D	M	125	7D	}
78	4E	N	126	7E	~
79	4F	O	127	7F	delete

APPENDIX C

The SMART CHECKBOOK for the Micro Decision can use any of the following check forms from Deluxe Computer Forms. Samples of these forms are included in this packet, along with order blanks. A strip of eight continuous check forms is supplied for you to use with the checkwriter portion of the tutorial.

> 1. Deluxe Check Form #1004
> 2. Deluxe Check Form #1005
> 3. Deluxe Check Form #1023